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PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

TITLE VIII
MILITARY—MEDICAL COURSES

PREPARED BY
BUREAU OF MEDICINE AND SURGERY

BUREAU OF NAVAL PERSONNEL

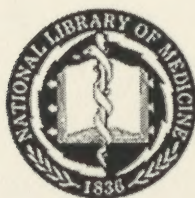
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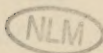
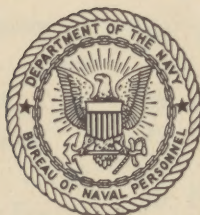
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NAVPERS 10818

CORRESPONDENCE TRAINING DIVISION
U. S. NAVAL MEDICAL SCHOOL
NNMC, BETHESDA, MARYLAND

MARCH 1949

PREFACE

The following material consists of a compendium of articles by well informed persons working and writing in this field, and is intended as a more or less "case presentation" or discussion of common and special features met with in handling personnel both for induction and subsequent services. It is further intended to give the reader an over-all picture of the problem rather than to offer established opinions or facts. The articles are arranged in a relative sequence with the view to one subject area blending into that following. Credit is given each author in a foot note. References indicated within a chapter by numbers in parentheses are listed at the end of the chapter.

NOTE.—Italic figures in parenthesis used throughout this book refer to references at the end of chapters.

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BIOLOGICAL CONCEPTS IN PSYCHIATRY

THEIR MEANING AND RELEVANCE

INTRODUCTION

SECTION I

BASIC CONCEPTS AND FACTORS

CHAPTER 1

BIOLOGICAL CONCEPTS IN PSYCHIATRY*

THEIR MEANING AND SIGNIFICANCE

INTRODUCTION

Science is continually evoking a series of inventions that effect every phase of our daily lives. Time and distance alike diminish, and the very planets shrink to the measure of human hands. In addition to an increased knowledge of the physical world, which science has bestowed upon us, it has given us accurate information concerning the processes of life itself. Through the medium of biology, we have learned what sort of people we are, and how we may best exist in our novel surroundings. After all, this is what matters. Had we been presented with a new environment, without being told how to adjust ourselves to it, we should have known nothing of the perils that beset our path, and we should have gone rattling back into barbarism long ago. Biology represents, therefore, the magic wand that permitted us to escape the crushing power of dogma and superstition, and become a rationalistic race.

While biology has been of extreme benefit and value to mankind in general, we must investigate, through introspections, the mind of the individual, and study his mental conflicts, if we wish to penetrate into the real causes of the difficulties of life, for here are encountered numerous stumbling blocks to efficient adjustment. This is the field and province of psychology, a scientific discipline that gives us insight into how men know and think, how they reason and feel, and how they react under stress and strain. Supplementing the work of biology, the new genetic psychology has taught us the way in which we might all the more accurately deal with the many perplexing obstacles that confront us at every turn. It has accomplished this by emphasizing the driving power of the instincts, by tracing the genesis of impulses, by pointing out the forces that shape human character, and by pay-

ing specific attention to the biological needs of the organism at the psychological level.

The subjects of biology and psychology are coming nearer and nearer to occupy a common ground. These two sciences overlap to the extent that in the study of many problems it is almost impossible to determine where the one begins and the other ends. Each lends its support to the facts that serve to elucidate the phenomena of the other order, and they are really the same science viewed from different aspects. In its broadest meaning, biology is inclusive of psychology, the humanities, and the social sciences, and it is in this sense that we shall use the term. Biology concerns itself with all of the mechanisms that the individual uses to bring about an adjustment with his surroundings. Hence, it is likewise interested in any noxious agent or element, either exogenous or endogenous, which may set up a reaction within the organism and disturb the state of physical equilibrium in which it is accustomed to dwell.

In order to dominate their environment, and to live in perfect harmony with the external world, organisms must be able to conquer constantly arising new problems and situations. In the lowest forms of animals, this adaptation is accomplished by physical and chemical reactions. In the higher types, the same physiological functions are at work in the process of adjustment, but in addition, the aid of a nervous system is brought into play. In the human organism, psychological and social attributes are added. Viewing the psyche as the means by which the individual as a whole is adjusted to his surroundings, it follows that diseases of the mind, or the neuroses and the psychoses, inasmuch as they throw his adaptive responses out of gear, so to speak, will prevent him from reacting in an efficient manner to environmental conditions. This constitutes a problem that is thoroughly biological. It is also the subject matter of psychiatry. This specialty becomes, therefore, a

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medical branch of applied biology, and it should be studied as such.

The practicing physician has too often looked upon the new biological psychiatry as a subject, unattractive and obscure, difficult and abstruse, and as one with which he need have no immediate concern. If the surgeon and the internist, however, will but take the trouble to analyze the problems confronting them in the surgical and medical wards of hospitals, and in their own private offices and consulting rooms, they will find psychological factors of importance in a large proportion of their patients. Although it is cultivated as a separate discipline, psychiatry stands in close and intimate relation with internal medicine, and it must always represent an important chapter to the clinician. The internist will certainly fail in his work unless he is acquainted with the aims and methods of this specialty, and unless he is familiar with the various reaction types as exhibited in different individuals. At the same time, the psychiatrist can have become really expert only after a thorough training in internal medicine.

Many of the newer discoveries in medicine have been brought to light through the channels of biology. This latter science has also been a potent factor in changing our conception of mental disease, and it has been responsible for many of the revolutionary advances in psychiatric thought in recent years. Indeed, a biological approach is fundamental to all of the clinical branches of medicine because it furnishes us with a standard of normal physical and mental activity. As a result of the emphasis now being placed on the study of man in biology, a more comprehensive survey and a more intelligent understanding of the human organism have been made possible. This is a fact of momentous importance to psychiatry, in particular, and to the practice of medicine in general. It occurred to me, therefore, that it might be of some interest and value at this time to very briefly review a few of the more basic concepts in biology which may be said to underlie an adequate grasp of the problems of psychiatry, and to point out, wherever possible, their significance to medicine.

STRUCTURE VERSUS FUNCTION

The morphologists, or structuralists, on the one hand, maintain that structure is the cause of function. They insist that the essential thing in development is the transformation of one structure into another, the functions occurring in the course of evolution being regarded as merely incidental phenomena. To them, all disorders that affect the body have a meaning only when they can be logically explained by a detectable alteration in structure. One reason for such an attitude, perhaps, is that the principal stages in the growth and differentiation of structures are better known, and they have been described in far greater

detail, than in the case of functions. Then, too, the theory of organic evolution, introduced by Darwin in the nineteenth century, and an increased knowledge of the physics and chemistry of the body, achieved by a series of brilliant physiologists, as well as the discovery of the microbes and their relation to infection, tended very strongly to establish and reenforce this strictly mechanistic view of the individual organism.

The vitalists, or functionalists, on the other hand, claim that function determines structure. They teach that the various habits and activities of the organism produce corresponding changes in structure, this being the chief problem in evolution. They cite as justification for their position the fact that a great many functional distinctions are recognizable between organisms that are morphologically indistinguishable. It has also been noted that the autopsy table, and the highest powered microscopes, as well as other instruments of precision, have often failed to reveal structural changes where during life there was every reason to suspect their presence. In addition, the physiologists and chemists, the biologists and physicists, by applying the methods of their respective sciences to the study of organ activity in man, have been able to demonstrate changes in function in many diseases where no alteration of structure has been visible. The formulation of a purely psychological conception of the neuroses by Freud, and the inevitable increase in the number of severe cases of psychogenic disorders with no organic basis during the last World War, helped still further to substantiate the claims of the vitalists for the primacy of function.

The only way in which this controversy can be settled is to trace the structures and functions of the mature organism, in all their bewildering complexities, back to their simpler beginnings, and study them in the process of becoming. This involves a knowledge of differentiation, which may be defined as the progressive change from the general to the special, or the setting aside of certain cells for specific work and duties, or the accumulation of function as structure. It will be impossible to give a detailed account of all of the phenomena of development here, because it is too extensive a subject. Nor can we even indicate the principal stages and phases in which the evolution of the more important groups or organs manifests itself, despite the fact that therein lies the answer to our problem.

Suffice it to say, according to more recent trends in biology, neither structure nor function precedes the other as cause precedes effect, but their growth, development, and evolution are contemporaneous, and they go hand in hand. In other words, as the organism is confronted with more intricate problems of adjustment, and as it comes into more intimate contact with its surroundings, new and

more highly specialized structures are formed, with a progressively more complex differentiation of functions. In biology, therefore, structures and functions are never investigated separately, but the one is considered just as essential as the other in the study of any problem that affects the individual, especially disease. There is a growing tendency, however, to emphasize function, and very rightly so. New functions arise whenever the organism is faced with the need of more efficient means of conquering its environment. In order for the functions, thus developed, to be of maximum benefit to the individual, they must be stable and definite, fixed and stereotyped, and they must be structuralized, or laid down in permanent pathways. It is this necessity that brings about the formation of structures, which are the physical substrata of functions. In an ultimate analysis, structure in nothing but organized function. The elaboration of these biological principles in recent years has resulted in the building up of a concept of disease, particularly in psychiatry, that stresses function instead of structure. This new point of view has already supplemented, and it will eventually supplant, the old ideas of the structuralists.

The significance of this subject to medicine becomes apparent at once. It is simply that the internist and the surgeon must not permit themselves to think exclusively in terms of either structure or function. They should give equal consideration to both. This has not been done previously as structures have been emphasized and functions neglected. The school of pathology founded by Virchow has left such an impression upon medicine that the modern physician continues to be obsessed with the feeling that he must discover a defect in structure in order to account for disease in human beings. All of his efforts at treatment are dominated by this point of view, and he is often amazed to find that certain forms of therapy, which he regards as being unsound and as having no relation to the case whatsoever, very frequently accomplish the desired results. Such an attitude needs to be corrected. The search for organic lesions is important, but it will never bring about a complete understanding of disease. A knowledge of the behavior activities and the reactions of the organism that follow an initial stimulus or fault is also necessary. This means that internal medicine, following the lead of psychiatry, must recognize frankly and completely the claim of function to a place of equal importance and reality with structure.

Functional disorders are spread thickly throughout each department of medicine and surgery, but they are particularly prevalent in the endocrine, gastro-intestinal, cardiac, gynecological, urological, and metabolic clinics. It has been conservatively estimated by numerous authorities, notably

Strecker and Ebaugh (1), that functional disease constitutes from 60 to 70 percent of medical practice. In other words, a large majority of the patients seen in the dispensaries of our large hospitals, and in the consulting rooms of private practitioners, present symptoms and complaints for which no adequate organic basis can be found.

In spite of their frequency, however, these functional disturbances are commonly neglected, misunderstood, and improperly treated. They command interest only as long as they are considered to be diagnostic problems. As soon as it is discovered that the patient has "nothing the matter with him," as we have often heard it expressed, he is passed over lightly, no further attention is paid to him, and he is referred to the psychiatrist. From a technical standpoint, most of these cases come under the broad heading of the psycho-neuroses, but a great many of them do not. For practical purposes, as suggested by Peabody (2), the patient who has a functional disorder may merely be suffering from severe subjective sensations due to alterations in the physiological activities of one or more of the organs in the body. His symptoms may depend upon an increase or a decrease of a perfectly normal function, or simply upon his suddenly becoming aware or conscious of a wholly normal function that is usually not noticed. Or as McDougall (3) would have it, functional disorders represent nothing but an ill-adjusted timing of the reactions of the various organs and an imbalance of their relations to one another. The ultimate causes of these disturbances of functions are to be found, not in any gross structural changes in the organs involved, but rather in the influences emanating from the intellectual and emotional life of the patient, which may effect in one way or another any portion of the body. To say that an individual has a neurosis, therefore, because no demonstrable pathology can be pinned on him, so to speak, is wrong and not even logical.

Functional disorders really belong to the field of general medicine. It is often extremely difficult to determine whether we are dealing with an organic disease or with a pure disturbance of function, and the differential diagnosis requires the broad training in the use of clinical and laboratory methods which forms the equipment of the internist. Then, too, the patients themselves very often fear the stigmata of any professional contact with a psychiatrist, and they prefer to go to their family physician. As a matter of fact, many of these cases can be helped by the general practitioner without the aid of highly specialized psychological technic, if he will but appreciate the significance of functional disturbances and interest himself in their treatment.

It should be borne in mind, of course, from what has already been said, that we are really not justified in draw-

ing a hard and fast line between organic and functional disorders. The opposition between them does not rest on a sound basis. Organic diseases are invariably accompanied by altered functions, while it is probable that an unlimited microscopist could always discover corresponding changes in structure in purely functional disturbances. Function is, in a large measure, dependent upon structure, and vice versa, and disease will continue to be an enigma until a definite correlation between them is made. The internist will certainly expand his horizon and broaden his outlook if he concerns himself with the vital capacities of organs instead of with mere changes in structure, and if he adopts a functional concept of disease, as suggested by biology and psychiatry. Such an approach will do away with therapeutic nihilism, because treatment will then be directed towards improving function rather than to eliminating the anatomical changes produced by disease, which usually are permanent.

BODY AND MIND

The origin of the mind is a topic upon which there has been much speculation by philosophers and theologians. One of the very earliest hypotheses was that which is known as transmigration. This doctrine probably reached its greatest development in India, where it formed an important part of the Buddhistic belief. It was also a part of the religion of ancient Egypt, and it was embodied in the writings of Pythagoras and Plato. According to this theory, the number of souls is a constant one; souls are neither made nor are they destroyed; but at birth a soul which had once tenanted another body enters the new body. The view was adopted later on that God creates a new soul for each body that is generated, and that every soul is thus a special divine creation. This has become the prevailing concept of the Christian Church, and is spoken of as creationism. Still another doctrine, which has been given the name of traducianism, taught that the souls of children are generated from the souls of parents as bodies are from bodies. This theory has been defended by certain modern theologians, but it has been formally condemned by others. Traducianism came much nearer to the present-day scientific ideas concerning the development of the mind than did any of the other doctrines. In all of these theories, the psyche, or the soul, or the mind, was regarded as an entirely separate entity, which inhabited the body during life, and which departed at the moment of death. They were all based on erroneous beliefs as to biological phenomena, and hence they did not hold.

In addition to the various theoretical ideas as to the origin of the mind, numerous conceptions of the relation between the higher mental functions and the physical processes underlying them have been introduced. A brief defi-

nition of each will suffice. The theory of epiphenomenalism holds that mental reactions are due to physical changes taking place in the neurones in much the same manner that machinery gives rise to noise when in motion. According to another view, mind and body are merely two aspects of a third reality, the nature of which has not yet been revealed to us. In the hypothesis known as psychophysical parallelism, the psychic and physical processes occur as contemporaneous accompaniments of one another without any direct casual relation. The two series, physical and mental, run parallel, but there never was, nor can be, any transition from the one to the other. The school of psychic monism regards the mind as the only reality, and believes that matter has no existence outside of consciousness. The animistic theory teaches that there is a non-material agency in all living things that exerts an influence over their actions. These various conceptions amount to nothing more nor less than pure metaphysical speculation. They have no practical value, and they are of interest only from an academic point of view.

The only way in which we can gain any real insight into the nature of the mind, its relation to the body, and its development, is to study the psychical processes of all organisms from the lowest to the highest, as revealed by their activities, their reactions to stimuli, and their general behavior under normal and experimental conditions. When this is done, the fact that the mind, as well as the body, develops out of the germ stands out in bold relief. The essential oneness of life holds true here as elsewhere. A very excellent description of the evolution of the mind from its germinal bases has been given us by Conklin (4), and we can do no better than to briefly summarize his views on the subject.

One of the fundamental properties of all protoplasm is general irritability, or sensitivity, which is the capacity of responding to stimuli. In the course of development, general sensitivity becomes differential sensitivity, or the ability to respond differently to stimuli that differ in kind, quality, and degree. This in turn gives rise to various special senses and sensations. Such sensitivity is the basis of all psychic processes. All of the reactions of germ cells and of the lowest organisms are in the nature of reflexes and tropisms. From these simple mechanical responses develop the complex automatic movements involving nerve centers, the inherited instincts, and the acquired habits of the mature forms of higher animals. Protoplasm has the capacity of registering and storing up the effects of stimuli for a short time. This is termed organic memory. Out of this function arises the faculty of associative memory, or the power of nerve cells to preserve the effects of former stimuli, or experience, for much longer periods

and in more varied combinations. By the gradual elimination of useless responses, and the preservation of the useful ones, the behavior of organisms comes to be purposeful and intelligent. All of the evidence points to the fact that human beings arrive at reason and intelligence by the same process of many trials and errors mixed in with a few successes, a remembering of these past experiences, and an application of them to entirely new conditions. Where several responses to a stimuli are possible, and where it has been learned that one response is more satisfactory than another, action may be limited to this particular response, not only by external compulsion, but also by the internal impulse of experience and intelligence. This is what is known as conscious choice or will. In spite of the frequent changes of the materials of which we are composed, our sense of identity remains undisturbed throughout life, it being dependent upon the continuity of individual organization, especially of the nervous system. Associated with this continuing sense of identity and developing out of it is the most complex of all psychic phenomena, or consciousness. The elements out of which it is formed are found in the germ cells, and by a long series of various combinations and transformations due to interactions with one another and with the environment, the fully developed condition arises. At the particular time the individual becomes aware of the effects of stimuli, he experiences subjective phenomena, such as emotions, perceptions, judgment, imagination, and other psychological processes, which are usually included under the term "mental."

As a result of numerous investigations in biology, we now know that there is nowhere in the entire course of development a sudden appearance of psychical processes, but there is a gradual evolution of them from simpler and simpler beginnings. From the very start, every organism, no matter how far down the scale it may be, shows a differentiation into a head end and tail. In an elongated prone animal moving forwards, the head end of necessity comes first, most intimately, and most intensively into relationship with any change in the environment. The head end is naturally exposed to the operation of forces that differ a great deal from those to which the other portions are exposed, and hence it becomes decidedly different. The earlier acquisition of information concerning the outside world necessarily gives the head end exceptional opportunities for influencing the rest of the body. This predominance is still further accentuated by the development of the organs of special sense in the head region. In some very primitive and remote ancestor of the vast majority of animals and man, the front or head end develops out of all proportion to the other parts of the body, becomes en-

hanced in importance, and forms the great centralizing and coordinating organ, or brain. This latter constitutes a dynamic locus wherein are concentrated those activities to which later in the course of evolution the name of "mind" is given.

Utilizing the above biological principles, psychiatry teaches that the psyche is just as old as the soma, and that there is no more reason for supposing that the mind is supernaturally created than that the body is. In other words, just as the structures and functions of the body may be traced back to the simple and fundamental properties of the germ cells, so the characteristics of the mind may be found to exist in germinal protoplasm. The development of mental faculties runs parallel with the development of bodily structures. No fact in the realm of science is more certain or more significant than this, from both a practical and a philosophical point of view, and yet no fact is more generally disregarded. Body and mind belong to the same order of phenomena, and the old distinction that existed between them has disappeared entirely in the light of newly acquired knowledge in biology and psychiatry. This means that physicians must no longer think of the mind as something very mysterious and incomprehensible, and they must not regard it as being closed to anyone except the expert and special student, as most of them are inclined to do now.

A definition of mind is impossible. Mind is known only through its operations. We are conscious of our own minds from subjective evidence within us. We realize that mind exists in other persons because they act in obedience to outward circumstances as we do ourselves under similar conditions. Mind is the medium through which the individual becomes aware of the many things that constitute his surroundings, and of the laws that govern them. It is that subtle something through which our feelings are stirred, and by means of which we act and think intelligently. Mind is an adaptive mechanism which coordinates and directs all of our reactions as a whole in an endeavor to push us along in such a manner that our own interests, as well as those of society, are served to the best advantage. The human psyche is the highest form of structural and functional integration that has so far been developed, and it represents the final answer of the organism to the increasing demands placed upon it by the complex environment.

As far as the relationship between body and mind is concerned, they are so closely interlinked that it is impossible to conceive of the one apart from the other. The natural operations and processes of the mind depend upon the relative integrity of the body, and vice versa. Mind is related to body, as function is to structure. Mind is not

the cause of body, nor body the cause of mind, but both are inherent in one common individuality and organization. The problems that confront the psychologist are exactly the same as those with which the physiologist is concerned. In other words, body and mind must ultimately be described in similar terms.

UNITY OF THE ORGANISM

A great many opinions have been put forward as to just what is responsible for the unity of the organism and what accounts for the uniformity of its behavior. The so-called corpuscular theories postulate a multitude of specific material entities in one form or another, each of which is supposed to represent some characteristic of the organism, the latter presumably being the product of their combined and harmonious activity. These theories fail to take into consideration, however, the basis of the individuality of the hypothetical physiological units, and their orderly integration: They merely translate the problem into terms of the meta-microscopic anatomy of the organism, and they are fundamentally teleological and anthropomorphic in their implications. The vitalistic theories assume the existence of a non-mechanistic principle which controls and orders the physiochemical factors to a definite end or purpose. This vital force, which has been called *entelechy* by a number of authorities, is entirely independent of physiochemical laws and is superior to them. It constructs the organism as a man would build a machine. These theories recognize and state more or less clearly the essential problem instead of ignoring it completely, but they are frankly speculative and involve assumptions which are unwarranted. The organism has often been compared to a crystal. This has led to hypotheses which state that the laws underlying unity and order in the organic individual are the same as those governing the aggregation and arrangement of molecules. There is no optical or other evidence, however, for the crystalline character of protoplasm in general, and so these theories may be dismissed as being unsatisfactory.

Recent investigations have demonstrated that certain parts of the organism produce substances which are essential to the normal activity or structure of other parts. Many observers state that every organ in the body is an organ of chemical correlation, which means merely that it produces something which plays a role in making other parts what they are. The hypothesis has been advanced, on the basis of these facts, that these chemical correlations are primarily responsible for unity and order in the organism. It is quite likely that chemical correlation is a factor of very great importance in determining the character of events in the organic individual, but it does not give us the solution of the real problem of unity. Chemical cor-

relations depend upon the production and transportation of specific substances within the organism. It is evident, therefore, that parts decidedly different, or an organization of some sort, must be already present in order to produce such substances. In other words, the individual must exist as such before chemical correlation is possible.

In this connection, the work of Child (5) is of monumental importance. He conducted a series of experiments, extending over a period of fifteen years, in which he studied and analyzed the processes of individuation in lower animals. As a result of his investigations, he reached the conclusion that the physiological individual comes into being because of the relationship that exists between protoplasm and its environment, and not because of any self-determined or inherent organization in the former. In other words, he has given us a dynamic conception of the foundation of unity and order in the organism. Let us summarize his views very briefly.

To begin with, he assumes a mass of protoplasm, which is morphologically and physiologically homogeneous and undifferentiated. If a stimulus in the environment is permitted to act upon some point of the surface of such an aggregate, the first result is an increase in metabolic rate in the region immediately affected. This is followed by an irradiation of a dynamic change throughout the protoplasm from the point of original contact. As the wave of activity spreads, it successively acts as an exciting factor. This process is fundamentally a transmission, for it consists in the passage of energy, and not in the bodily transportation of substance. The transmitted excitation gradually decreases in degree and intensity, and in its ability to produce further changes, until finally it becomes inappreciable and dies out altogether. In other words, a decrement in effectiveness occurs in transmission. The metabolic rate is highest at the point of original excitation and slows down in direct proportion to the distance from the spot where the stimulus was first applied.

If the external factor acts only momentarily, the changes in the protoplasmic substratum are slight and last only a short time. If the stimulus, however, is long continued, or repeated often enough, or if its strength is increased, the irritability or reactive capacity of the protoplasm is quickened, and permanent changes in its structure occur. These changes are greatest at the point of origin, where the excitation is most intense, and decrease with increasing distance from this region. In other words, there is established what Child has termed a dynamic or metabolic gradient, which becomes the starting point of a permanent quantitative order in the living protoplasm. Such an order represents a physiological axis or the physiological individual in its simplest form. This first order to arise is the chief, or

polar, or major axis, or the main gradient. Similar orders which are developed later determine minor axes or gradients, and on the basis of these the symmetry of the individual is perfected.

In a metabolic gradient a relation of dominance and subordination exists between the levels of the highest and the levels of lowest rate. This is a simple and necessary result of the differences in rate of reaction. The region of highest irritability, or rate of reaction, must control all regions of lower rate, because it reacts more rapidly and more intensely than other regions. Its greater irritability also determines that it shall react to some conditions which are not effective in other regions. Consequently, the excitations transmitted from the region of highest rate are more effective in determining the metabolic rate at other levels of the gradient than the changes transmitted from any other region. The region of highest irritability, or rate of reaction, is then a physiologically dominant region because it is the chief factor in maintaining the gradient after it is established. This dominant region of the gradient is relatively independent of other regions, while the latter are relatively subordinate to the former. In general, each level of the gradient dominates lower levels, and is in turn controlled by higher levels.

As a result of the constant interaction between the organism and its environment, certain substances begin to collect along the pathway of the main gradient. The nature and accumulation of these substances is dependent upon their relative stability in relation to the metabolic rate of the particular part of the gradient where they are found. The substances which gather at each plane of the gradient must of necessity be of the same osmotic tension as the energy transmission at that level. In other words, the dynamic gradient is in a state of physiochemical equilibrium. As a rule, only the most stable substances can accumulate in regions of higher metabolic rate, while substances of less stability may exist where the rate is lower. It will thus be seen that qualitative differences in the different parts of the gradient arise, and that each level of the gradient is characterized by specific substances. This is the beginning of differentiation, which now proceeds in an orderly fashion very much as if there were underlying it a plan or scheme specific for each kind of individual. The region of highest metabolic rate becomes the apical area of the main gradient or the head end of the organism, while the region of least activity is the basal portion and develops organs of attachment. The localization of parts with respect to the minor gradients is also definite and characteristic. An individual has many gradients, and each organ has a dominant gradient of its own and probably numerous subordinate ones. All of the dynamic forces of

growth and development in the organism can be visualized as operating along the axes of these multitudinous gradients, the latter being held in precise and orderly organization because of mutual relations of dominance and dependence, and all of them in the last analysis being under the direct control of the region of highest metabolic rate in the main gradient, or the head end. Such are the theories of Child, which are based on scientific experimental data, and which account in an adequate way for the processes of integration in the individual.

We begin now to get some idea of just what we mean by unity of the organism, and what it stands for. We can best define this concept perhaps by stating that in biology structures and functions, body and mind, are considered to be inseparable. Each depends upon the other for existence, and anything that modifies the one must of necessity modify the other also. They all develop together from the germ in a manner that is normal and specific by progressive differentiation, and they are but different aspects of one and the same thing, namely, organization. The component elements of the organism are not thrown into place in a helter-skelter fashion, but they are slowly evolved under the dominance of a head end, which controls all of the subordinate axes and gradients of the body. The entire individual is a sharply defined biological unit, which cannot be divided into parts without altering their character and significance. The only justification for dealing with these different constituents of the organism as if they were separate entities lies in the increased effectiveness of such treatment from an academic point of view.

The lesson to be derived from this principle of the unity of the organism, as far as medicine is concerned, is that the mind cannot be kept out of any problem that affects the individual, especially disease. This is obviously fundamental in psychiatry, it is of equal importance in therapeutics, and it is often of the most profound significance to the surgeon and to the internist. Every sick person, no matter what the nature of the malady may be, shows some variation from his normal mental state. Scarcely a single patient who is critically ill, as in typhoid fever, pneumonia, erysipelas, influenza, or after a surgical operation, thinks and acts as he does in health. To put it differently, there is in every pathological condition, over and above the physical derangement present, a certain nervous and mental element, which varies in degree in different individuals, and which constitutes a more or less conspicuous part of the disease entity. In other words, there is a mental aspect to every illness, whether medical or surgical. In mild disorders, this amounts to little more than a group of disagreeable feelings, which call for no special attention directed to their relief. In more serious diseases, however, the nervous and mental element may, and often does, be-

come a very important factor in that it lowers the resistance of the patient, aggravates the organic pathology already present, and hinders recovery. In the language of White (6), "the psyche is the central station, the clearing house, so to speak, for all the activities of the body, and hence, every physical symptom must have its reverberation in the mind of the patient." Every morbid process, therefore, with which we deal, is in reality a psychophysical problem. The psychical reacts on the physical, and the physical on the psychical. In diseases of the psychical life, the psychiatrist never dares to lose sight of the physical organism, because he knows that if he dwells too long upon the mysteries of a psychical unconscious he may forget that the body is ill. On the other hand, the internist must always take into consideration the psychological, as well as the somatic symptomatology, in the study and treatment of disease, if the latter is to be fully encompassed, and if our methods of total diagnosis are to be improved.

The fact that every organism, from the lowest to the highest, represents what might be termed a psychosomatic unity, as we have just seen, indicates that we have no right to separate body and mental disorders, and to say either internist or psychiatrist, which is commonly done in medical practice today. Always it should be somatic and psychic treatment at the same time, and in the proper dosage and relationship. This is what modern psychiatry insists upon. Such an approach involves a complete study of every case, and requires not only a detailed physical examination, including all the necessary laboratory tests and special procedures, but also an estimate of the personality make-up of the patient. If no organic basis can be found for the symptoms which he presents, inquiry should then be made into marital conflicts, financial failures, religious difficulties, sorrows, disappointments, anxieties, and thwarted ambitions and ideals in social life. This can be done diplomatically without seeming to pry into his private affairs, and without attempting to delve into the unconscious, or to unearth buried sexual complexes. Having gained the confidence of his patient, the physician is then in a position to use drugs and diets at the same time with psychotherapy in the form of convincing reassurance and general reeducation. It is necessary, therefore, for all internists and surgeons to possess at least a working knowledge of the mechanisms at the psychological level, and to recognize that they are just as reasonable, and just as definitely determined, as the physical, chemical, and physiological reactions with which medicine has so long been familiar in its other departments.

ORGANISM AS A WHOLE

When the discovery of the cellular structure of plants and animals was announced to the world, it was heralded

as an epoch-making event. And so it was. The cell was the smallest morphological unit exhibiting vital activities that science had so far been able to find. The tissues of the more highly developed creatures were simply regarded as an aggregation of cells. The organism was explained by the sum of the substances of which it was supposed to be composed and their products. The human individual was considered to be nothing more nor less than a constellation of different elements. It soon became evident, however, that the cellular theory did not adequately account for life phenomena. Consequently, the concept that the cause of the existence of every part of the living organism is contained in the whole was put forward, or we should say revived, inasmuch as it had already been made the subject matter of an extensive literature, even dating back to the ancients. This idea from biology, because it is essential to its purpose, has been particularly elaborated in the realm of psychiatry. In this specialty, therefore, the dynamic organism, moving about as it does in its environment, and bringing all of its machinery to the task of effecting its various complex adjustments, is looked upon as something more than, and different from, the mathematical sum of its cellular constituents. In other words, the organism is more than a being that is merely physical, concrete, and tangible. It is an integrated whole, which exhibits many functions and reactions that are in addition to those that have so far been discovered in any of its component parts.

The important lesson to be derived from this principle of the organism as a whole is that we have no right to regard the body as being composed of a group or system of organs, each with a special function to perform, and each being a mere collection of cells, nothing more, nothing less. The anatomical elements of the body are not independent and autonomous, but they are related to the whole organism. In order to gain any knowledge of an organ and its functions, therefore, we must think of it, not as an isolated entity, but as an ensemble of relations. The various organs of the body function by virtue of their dependence upon one another, and upon the whole organism of which they are a part. Their activity is not due to any power inherent within their structure.

The failure to recognize the tremendous significance of the concept organism as a whole, together with the advances in scientific morphology, led rapidly to the partitioning of the body into various organs and systems. Intensive research around each of these anatomical subdivisions has opened up whole fields of professional endeavor. We have grown to look upon the diseases of the different organs as entities in themselves. Specialization in medical practice has been harmful in many respects, and it is essential to get away from too much of it. We need also to

eliminate the gradually increasing tendency to consider diseased hearts and livers, and so forth, as organs for which the body provides a sort of test tube, and in the treatment of which the personality of the patient is irrelevant. A change in this attitude will eventually come about as a result of the newer emphasis on the importance of the whole to an understanding of the parts in all phases of biological research.

The cardiologist, the urologist, the gastro-enterologist, and other medical specialists, are certainly no longer justified in considering the organs and the diseases thereof in which they are primarily interested to the exclusion of the rest of the body. One need only to refer to disorders of the thyroid gland, for instance, to appreciate that disturbances in this organ are reflected in the circulatory system and other remote parts of the body. The effects of cardiac pathology are often manifested in the liver, kidneys, and lungs. The secretory processes of the various glands, the work of the heart, the rhythmical nature of the respiratory movements, the activation of the ureters and the bladder, the propulsion of the food through the gastro-intestinal tract, and the nutrition of the body as a whole, are all profoundly influenced by diseases of the cerebro-spinal nervous system. Acute infection often leads to febrile delirium arterial hypertension and arteriosclerosis may produce certain forms of encephalopathy, and uremic poisoning frequently causes disturbances of consciousness. Examples of this sort could be multiplied, but even these few illustrate in a rough way the interdependence of all parts of the body. Internal medicine, following the teachings of psychiatry, must stress and emphasize the role which the anatomical and physiological units of structure, whatever they are, play in the whole economy, if it is to maintain its proper perspective, and not drift into too narrow a point of view concerning the human organism.

To know an organ and its diseases is the apparent aim of most medical specialists. The ultimate goal of the psychiatrist, however, who appreciates the full meaning of the concept organism as a whole, is deeper and more far-reaching than this. He attempts to understand the patient as a total human being, with conflicts as well as a heart, with emotions as well as tonsils, and with thwarted purposes as well as a gastro-intestinal tract. In other words, instead of being interested in the pathological changes in some particular portion of the body, he surveys the entire individual. This enables him to treat the patient from many angles instead of from the standpoint of his chief or major disease alone. The real secret of the success of many physicians is the thoroughness with which they grasp and apply the principle of the organism as a whole to the baffling problems which they are called upon to solve.

In order to fully comprehend and understand the nature of disease in our patients, we must take into consideration the complex whole which the interacting parts create. Disease is a manifestation of the physiological reaction of the organism to various noxious elements in its environment. In other words, disease is a modality of organic activity, and like all organic activity, it is a reaction of the organism as a whole. From a biological point of view, therefore, disease represents, not the responses of separate organs, or partial reactions, but total reactions to the causative agent, whatever it might be. Strictly speaking, there is really no such thing as a local disease. All diseases are general in nature and affect the entire organism, but their principal manifestations may be more or less localized. The meaning and significance of these facts to internal medicine is that many chronic conditions of unknown etiology and pathogenesis may possibly be explained as reactions of the organism as a whole, or total reactions to long-continued stresses and strains, both from within and from without, the organic compensations and defenses of the tissues breaking down in certain directions, so that different organs become involved to a greater extent than others.

PSYCHOGENESIS

In all human beings there may be observed certain types of responses that are more or less closely allied to instinctive acts. These are the emotional reactions, which result from special kinds of stimuli affecting the entire organism. An emotional reaction on the part of a person, however, is not merely a physiological response to a stimulus. It is the reaction of an individual to a situation which impedes, facilitates, or stimulates some instinctive tendency. We recognize emotion in others by a characteristic behavior, and we are cognizant of physical changes occurring in ourselves when we are experiencing an affective state. The emotions, whether mild or strong, are always dependent upon, and accompanied by, alterations in the physiology of the body. There is a considerable mass of evidence, based on pathological and experimental lesions, that the thalamus is the great subcortical center for certain primitive forms of the emotions, as well as visceral sensations, and the feeling tones of pleasure and pain. These are given expression in muscular movement through the rubrospinal tract. The emotions serve to aid the body in undergoing the necessary changes for driving the organism into a state of activity. In other words, by means of the emotions, the attention of the organism becomes focused upon some particular point in its environment, so that its energies may be coordinated for a specific reaction. Moreover, the emotions intensify the marks made by experience,

with the result that upon the repetition of a stimulus, a more perfect response will be evoked in the future. It will be seen, therefore, that the emotions are related to a phase of behavior, as well as to feeling, and that they are adaptive reactions. In this sense, they are of tremendous biological significance and importance.

At the beginning of this century, there was a deeply rooted opposition to the idea that the emotions could induce illness, either physical or mental. Such a thing was generally repugnant to the then current medical thought. It did not harmonize with the prevailing physiochemical theory of disease as it had been crystallized by the brilliant achievements of the clinicians of that period. This was in striking contrast to the readiness with which the discovery of etiology of general paresis was accepted by the medical profession. Due to the lessons derived from biology and psychology, however, and to the emphasis placed upon it by psychiatry, it is now being appreciated that a large proportion of all of the patients encountered by physicians in their practice present psychic factors and emotional conflicts of importance. These are capable of producing a great variety of functional disorders, as well as organic or structural changes in the different organs of the body. This is the problem of psychogenesis, a fundamental psychobiological concept which demands scientific testing because of its far-reaching implications.

We are all more or less familiar with the role played by emotional states and conflicts in causing somatic disorders, and we see evidences of it almost daily in our routine ward rounds. Increased flow of saliva and gastric juice, vomiting, and all kinds of dyspeptic symptoms, may be excited by the sight of some revolting agent. Fright and anxiety often produce acute diarrhea. The influence of the emotions in the etiology of peptic ulcer has been emphasized over and over again. Many cases of ulcerative and mucous colitis may be regarded simply as physiological expressions of some deepseated emotional disorder. The occurrence of attacks of bronchial asthma and biliary lithiasis is more or less conditioned by the emotional state acting through the autonomic nervous system. The flushing of embarrassment, and the blanching of fear, is proof of the effect of these states upon the walls of the arteries. Clinical and pathological studies and observations have brought to light the fact that the morbid manifestations of such an organic disease par excellence as angina pectoris appear to be controlled, to a certain extent at least, by the emotions. Violent anger may sometimes play a part in seriously aggravating an already damaged heart, and in producing tachycardia, palpitation, premature beats, precordial distress, and other signs of disordered cardiac function. Emotional shock, especially fear, quite often brings on a frank exophthalmic goitre. We note also the

apparent effect of the emotions in the genesis and course of diabetes mellitus and arterial hypertension. These examples and many others, too numerous to mention, furnish abundant proof that psychic factors must have a very definite effect on the physiology of the body. If these emotional conflicts occur repeatedly, and if they dominate the life of the individual, it is logical to suppose that they might leave an imprint upon the tissues, and produce organic or structural changes.

It will be seen from the above, therefore, that it is highly important for all physicians to make, as a routine procedure, a definite inquiry into disturbing emotional factors in all individual histories, with the possible exception of the acute infections, as Favill (7) has suggested. If this is done, it will frequently be found that the digestive disorders in a particular patient began at a time when he lost a huge sum of money, due to a bank failure, and that they have recurred whenever he has been in financial straits, or when there has been a marked fluctuation in the stock market. Or it may be learned that a few years ago, upon arriving home from a business trip, a patient was informed of the death of a near relative from chronic myocarditis. He was overcome by the shock of the news, developed an attack of precordial pain, dyspnea, palpitation, and tachycardia, and then promptly fainted. Consulting his physician, he was told that he probably had heart disease, but he was cautioned not to worry about it. For over a decade he has not even so much as mentioned it, but his symptoms have continued, he has greatly restricted all of his activities, and he has lived constantly with the fear that he might pass away suddenly. Or again, we may discover that the headaches, and the pains in the back, of which this man complains, made their appearance at a time when he first felt the pangs of domestic incompatibility, and they become pronounced and more acute whenever he has a dispute with his wife. These hidden emotions must be recognized if the proper rapport between the doctor and the patient is to be assumed. In this connection, Stevenson (8) states that neglect of the emotional problems that are involved in the numerous complaints of the patient by ethical practitioners is today lending aid and comfort to the cultist, and is wasting a powerful instrument of treatment.

The average clinician very commonly approaches the consideration of pathological condition with far too little knowledge of their psychic antecedents. The successful physician, however, with a broad experience in the practice of medicine, knows that the varied emotional factors, which may affect the personal or domestic life of the patient, exert a tremendous influence on the etiology of disease. The causes of many conditions, seemingly due to

organic visceral disease, may be found in psychic or environmental backgrounds. A properly cultivated appreciation of these facts, according to Stengel (9), is as necessary to the trained internist as is a knowledge of the biochemical or physiologic changes which accompany certain diseases. He feels that it is a part of the routine duty of the clinician to recognize and determine by appropriate tests these latter factors in disease without calling upon the chemists and physiologists to point them out. In the same sense, he believes that it is essential to the efficiency of the practicing physician that he should be alive to the emotional and psychic factors in disease without seeking the aid of the psychiatrist. To overlook psychological causes at an early stage is just as grave an error as to fail to recognize and diagnose an infective process or a surgical anomaly, a constitutional disorder, or a frank pneumonia.

INDIVIDUATION

Each organism has a personal quality which causes it to vary its action indefinitely, to change its form, to try endless adaptations to external conditions, to produce young which differ from each other and from the common ancestor, and to alter its shape so as to secure the best possible adjustment to its surroundings. The traits and the characteristics, as well as all of the other variations, which living creatures take on, must always be in the direction of increased fitness, and those that hinder or incapacitate must be discarded. Those favorable peculiarities in individual specimens which enable them to better meet the struggle for existence will be developed from constant use. The eminently significant feature, however, is that in some way these changes are accumulated in the succession of generations, and new species, which are in a state of continuous alteration, appear on the earth. This is the biological process of individuation, which makes for increasing differentiation, not only in the race, but in the separate members thereof, and which renders each and every organism entirely distinct from all others.

People of the same age, sex, race, family, and social status, vary in every trait which so far has been measured or estimated. Individual differences, for instance, in stature, weight, strength of grip, endurance, pigment in skin and hair and eyes, and in resistance to disease, are common. We all vary greatly in our ability to concentrate attention. Even a superficial observation of human behavior reveals significant differences in the degree of initiative, originality, and emotional stability, which individuals manifest in a critical situation. Everywhere we turn we discover that a given stimulus fails to elicit exactly the same response from any two people. There is a difference in the kinds of moods which we allow to persist over

long periods of time. People vary widely in the traits that go to make up the different temperaments, which appear in varying degrees, and in bewildering complexities and combinations, in each person. Two equally important factors unite to produce this infinite variety in the human race, namely, heredity and environment. These are interacting and interdependent, and it is impossible to determine where the influence of the one begins and the other ends.

Because of these individual differences and peculiarities, it follows that the reactions of each organism, especially to disease, will be extremely variable, and that the symptoms of the same pathological condition will be different in each individual. These facts have long been recognized in psychiatry. In this branch of medical science, therefore, we try to seek out the individual factors in disease, particularly as they express themselves at the psychological level, and by an understanding of them, we endeavor to work out something constructive in the life of the patient under our care. In other words, each person who seeks help is individualized. This is the very essence of psychiatry, and may be termed its point of view, inasmuch as it is the only specialty in medicine that stresses this attitude.

For a long time the internist has been studying disease, and treating it, without a sufficient appreciation of just how the individual who had the disease was reacting to it. This tendency needs to be corrected. The general aphorism in psychiatry, treat the patient, not the disease, may be applied with equal advantage to all branches of medicine. One or two examples of this principle will suffice. A patient who has heart disease may be disturbed much more by worry over his wife and children than he is by the dyspnea from which he suffers, and as a result of his brooding, he may develop a long train of neurotic symptoms. In such a case, a talk with an understanding physician, who tries to make the situation clear to him, and who then has the social service department investigate and take care of his home conditions, does more to help him and straighten him out than a book full of drugs or diets. Or as Ruggles (10) shows, the patient who is to undergo a radical operation for cancer of the breast, or for some other surgical condition, may be very much concerned over the probability of success, and she may be thinking of the subsequent deformity that may be produced. From the standpoint of the surgeon, the problem is the same as in many other cases he has had, but the whole procedure to the patient is most profound. Attention to her peculiarities and personal reactions may prevent considerable shock, and bring about a favorable outcome. This is only an indication of what can be accomplished by treating the individual factors in disease. Neglect of them may result in the unsuccessful handling of the case.

CONCLUSION

In conclusion, let me reiterate that whatever fields we touch in medicine, persistently and inescapably, we find ourselves in the presence of problems that can only be approached in an intelligent manner from a psychobiological point of view. Exclusive somatic medicine, as we have already indicated, is fast disappearing from the scene, and there is a distinct drift noticeable to a conception of disease in which the sick person, as well as his individual organs, receives attention. The consideration of the patient himself should always dominate and surround the investigation of his affliction. When this is done, it is amazing how frequently the particular pathological disturbance with which he is suffering is found to belong irresistibly in the whole fabric of his personality. The medicine of the future, in addition to being concerned with the anatomical structures of the patient, must interest itself and include in its survey the important problems of human distress, social relationships, emotional maladjustments, and personality disorders of all types. This will come about as a result of considering each individual as a psychosomatic unit. Such an approach involves a knowledge of the salient factors of life, and its significance, which after all

is the principal theme, to which disease is but a corollary, and establishes a philosophy upon which the practice of medicine will ultimately depend.

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CHAPTER 2

CONSTITUTIONAL FACTORS IN THE SELECTION OF RECRUITS*

Recruit selection has always operated on the principle that any young man of sound body and reasonable intelligence could be made, with the proper amount and kind of training, into a good sailor. In peacetime the fallacy of this principle was not obvious because there was plenty of time for variants in constitutional make-up and temperamental capacities to find their own levels as to duties that they could perform with satisfaction or as to assignments to the various naval environments to which they could adjust themselves with contentment. If they could not reach their levels, they could ultimately be discharged and the loss of time and the wasted training and the nuisance value of the misfits were not counted as anything very serious.

The present necessity of enlisting large numbers of men, cutting short their training, and sending them out to situations requiring considerable responsibility and technical skill has resulted in the assignment of large numbers of men to duties for which they are obviously unsuited. These men are failing not because they are physically defective or because they lack the intellectual equipment with which to cope with their problems, but because they are temperamentally and emotionally inadequate to the situation.

This fact of large numbers of failures in the service does not necessarily mean that these men should not have been enlisted but that, during the period of training, a greater effort should have been made to determine their temperamental qualities or their behavior capacities in order that duties could be selected for them in which they had some possibility of succeeding, and that those who were not at the moment adequate to a duty could be given sufficient time and further training, in preparation for it. If we should eliminate from the service all those who show so-called neurotic traits or who at the moment do not

seem entirely adequate, a large group of potentially good recruits would be lost from the service.

Two obvious criticisms of attempts to select on the basis of temperamental characteristics present themselves. The first is that there is insufficient time to make any estimation of temperament; and the second, that we have an insufficient knowledge of the factors making up temperament to form any valid judgments.

An attempt has been made at the Portsmouth Naval Hospital to study this problem. Two groups were studied, the first composed of those who had obviously been successful in their adjustment to naval life, and the second, those who had been obvious failures. The material for the successful group was derived from a submarine crew who had been together for some time, and who, the commanding officer felt, formed a fairly representative group; and from a group of hospital corpsmen from the Portsmouth Naval Hospital. The corpsmen had ratings and positions of responsibility indicating their successful adjustment. The men were all interviewed individually, and, in addition to a history of their background, they were all asked what qualities they would look for in choosing men for their branch of the service. The qualities they enumerated reflected to a considerable degree their estimation of themselves and could not be considered entirely objective, but, because of their own success and the diversity of the individuals interviewed, it was felt that the qualities listed were sufficiently significant.

Below is a list of qualities given by the men who were successful in submarine work and hospital corps work:

SUBMARINE MAN

1. Maturity: Must be able to take care of himself; must be able to take responsibility.
2. Intelligence: High school level.
3. Must know how to mix; must be able to get along with people; must not be forward.

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4. Must be physically rugged; must be able to stand changes in temperature, irregular diet, irregular and long hours of work, conditions of poor ventilation.
5. Must not be nervous, anxious.
6. Must be patient, not need a lot of exercise; must not be restless.
7. Must understand discipline; must understand his place without being told and must not take advantage of the informality of the life.
8. Must be aggressive, eager, and anxious to get ahead.
9. Must be quick.
10. Must be clean.
11. Must be a worker.
12. Must be honest.
13. Must have regard for the feelings of others.
14. Must not be too moral.

HOSPITAL CORPSMAN

1. Intelligence: High school level.
2. Must have personal pride, be neat and clean.
3. Must be obedient.
4. Must be interested in hospital work.
5. Should have had past experience with similar work.
6. Must be honest, exact.
7. Must be eager, curious, alert, ambitious.
8. Must be quiet, not restless.

The group which had failed to adjust were drawn from apprentice hospital corpsmen and from prisoners in the Portsmouth Naval Prison who were 20 years old or under.

List 1 gives the summaries of interviews with 10 corpsmen who had either been repeatedly on report or who had been found inadequate to their duties and shows the temperamental qualities and personality traits found in these poorly adjusted individuals.

LIST 1

1. Seems a simple, likeable individual, who at his own level will do fairly satisfactory work. Recommend transfer to seaman or fireman rating.
2. Not very good material, but considering probable early over-protection and low intelligence, he is not doing badly.
3. Cyclothymic make-up. Capable of both excitement and depression. Insecure, anxious. Instincts and ideals poorly integrated with poor ego formation.
4. Excitable, stubborn boy, with poorly developed affect and not constitutionally well endowed in this capacity. Will need a great deal of supervision and personal interest. Recommend outside detail for a while and then return to ward.
5. Well-developed, powerful individual with great energy and very strong, deep emotions. Many of his attitudes result from a not too happy childhood. Many of his attitudes are quite mature but good emotional control has not yet been established. Wants hard work, challenges to his self-responsibility, and firm, interested, patient leadership. Wants submarine duty and has considered the physical and emotional hazards. Boy seems to have great potential value. Would recommend transfer out of hospital to active duty at sea.
6. Poor material for Navy.
7. Poorly adjusted, withdrawn, irritable, with considerable depth of mood. Unable to project emotions. Preschizophrenic.

8. Poor somatic material. Poorly developed. Probably inadequate to duty. Feels nervous, cries easily. Homesick and lonely. Has no friends.

9. Simple, childish, dependent, restless, and diffuse. Will probably never make a good corpsman.

10. Simple, poorly balanced, unstable, insecure individual. Certainly not hospital corps material. Might possibly get by in a protected situation. Boy is not good naval material.

List 2 gives the summaries of the interviews with 10 prisoners and again shows the traits and qualities found in these individuals. It is interesting to note the similarity of traits and qualities in the 2 groups showing that there is a common denominator of inadequacy and there is a large element of chance and circumstance in whether the individual continues to get by on a low level, becomes a hospital patient or ends up in prison.

LIST 2

1. Outstanding features are strong drives to aggression and sexual satisfaction together with poor affect, so that no sublimation in socially acceptable patterns is possible. Intelligence has never been used beyond immediate satisfaction of drives. Said he thought there must be something the matter with him because he always had such hard luck.

2. Constitutionally poor material and his environment has made him operate at his minimum rather than at his maximum.

3. Underdynamic, sensitive, introspective boy who is essentially poor service material. With more maturity and guidance might make fair corpsman. Was too immature to carry the load of emotional responsibility with which he saddled himself. Interview with wife by some member of staff might help his future.

4. Hyperirritable, sensitive, sensory individual, with very little control over his instinctual reactions. Dependent, affectionate, will need plenty of activity, friendliness and stimulation. Efforts should be made to stimulate his intellectual processes and allow him to sublimate some of his instinctual desires. Must learn emotional control.

5. Underdynamic individual with poorly controlled instincts. Poor psychological control. Enuresis. Poor social relations. Poor standards and convictions which are readily soluble in alcohol.

6. Boy is blocked, repressed, withdrawn. Affect is inappropriate and inadequate to thoughts expressed. Irritable, frequently smiles in silly way. Impresses as preschizophrenic and worthy of close watching.

7. Underdynamic, weak, immature boy without drive, ambition or intellectual interest. Soft, dependent, sensitive. Work should be towards an emotional goal, admiration for some adult person with development of ideals and conviction. Has good social sense which should be utilized.

8. This boy is definitely preschizophrenic and needs careful watching and guidance. Needs occupation and guidance with it.

9. Large, soft, characterless individual who is emotionally unstable. Needs development of more hardness, conviction and ability to sustain his convictions. Would think facing fairly hard physical tasks from which he could not withdraw or put the burden on others might help.

10. Slow sensitive boy who has been through many emotionally traumatic situations. Strong instinctual desires, with con-

siderable autonomic instability making their control difficult. Little opportunity for development of ideals but boy has surprising feeling for the physical world and has been not too much spoiled by his contact with the human being.

It is obvious that these qualities represent a combination of inherent constitutional characteristics and the results of environment and training. It is equally true that it is the inherent characteristics that condition an individual's reaction to his environment and that he can only react to this environment within the limits of his constitutional make-up, and that if he is to possess these qualities, he must have certain inherent characteristics to serve as a basis of the desirable qualities. Conversely, if he does not possess them but has the fundamental qualities, then training and reeducation will enable him to develop them. There will never be time in recruit selection to make a complete analysis of the background, but if we can get at the inherent capacities, we can at least know whether the material is sufficiently good to work with and whether there are present characteristics which will make certain phases of naval life difficult or impossible for the individual.

The six characteristics listed below are regarded as being necessary to survival and reproduction, as being transmitted by inheritance, as varying in the degree to which they are possessed by any individual, and as being subject to modification by disease and other environmental conditions.

1. Physical make-up.
2. Irritability—the speed of reaction to stimulation of reflex patterns or instincts and the intensity of the feelings accompanying the stimulation of these patterns.
3. Energy or drive—the capacity to sustain and carry to a successful conclusion the reflex patterns or instincts which have been stimulated.
4. Affect—the ability to enjoy and understand human relationships, to feel affection, sympathy and loyalty, to be able to modify one's own feelings for the sake of better relationships.
5. Mental activity—curiosity, alertness, interest.
6. Intelligence—capacity to learn, to remember.

It is possible in a 15-minute interview to make a fair estimate of the degree to which these characteristics are possessed by any given individual. They are characteristics recognized by every trainer or breeder of dogs and horses. The persistence of accentuation or diminution of these temperamental characteristics in certain blood lines is made a basis of breeding, and plans of training take place around these characteristics as fixed points.

In the determination of physical efficiency, functional examination must be added. In the determination of the first item of physical make-up, the ordinary static examination, as done in the recruit station, does not actually reveal or answer the questions that must be known to determine the individual's ability to handle situations requir-

ing hard work, persistent effort, exposure to temperature changes, and severe muscular activity, so that functional tests of cardiac function under effort, pulmonary capacity, a short gastro-intestinal history, and any other questions designed to reveal the functional capacities of the various organ systems are important.

In studying speed of reaction, whether to a simple single reflex or a complex pattern belonging to the group of instincts, we want to know, beside the speed with which it is set off, whether its function is accompanied by feelings of excitement, fear, anger, somatic symptoms of headache, dizziness, palpitation, flushing, sweating, tachycardia, nausea, hyperperistalsis, vomiting, diarrhea; whether stimuli to the reproductive patterns reveal stability or instability, are well controlled or poorly controlled. History will reveal a good deal of it. The recruit's behavior during the psychiatric interview, his behavior with his fellows in the barracks, his reactions under restriction, criticism, pressure of one kind or another, the speed with which he obeys orders, his ability to get along on a ship, his sleep, his reaction to diet, the number of times he comes to sick call, all will have a bearing on the factor of irritability. Test situations can be set up which might produce anger, fear, excitement, or resentment and the recruit can be deliberately placed in these situations.

Energy and drive again can be determined by a short history of the recruit's interests, the persistence with which he has held a course of behavior, his athletic activities, the kind of jobs he has looked for, his endurance during recruit training; and there again test situations for the individual's ability to sustain effort can be easily devised.

Affect can be easily brought out by the recruit's story of his family relationships, his friends, both boy and girl, social activities, attitudes toward the war, reasons why he came into the service, etc.; and confirmation of this may be obtained by observation of his relationships with the other recruits, whether he becomes dependent on the approval of other people, whether he is able to handle himself independently, make his own decisions, whether he is a leader or a follower, whether he appears considerate of others and gives way to the desires of others or whether he is continually trying to put himself in front and to protect himself.

Mental activity can be determined through a short history of the recruit's interests, his school progress, his views on and knowledge of current topics, and again, the interest and curiosity which he displays in learning during his training period, the intelligence of his questions, and his ability to learn new technics.

Intelligence can be readily and fairly accurately determined by well standardized tests.

The first three of these six capacities controlling and forming the basis for the instinctual level of behavior, are the strongest motivating forces in behavior, and are possessed by all members of the animal world. The social, cultured, intelligent human being is produced by the integration and control of these capacities by the other three of affect, mental activity and intelligence. These capacities do not operate in an isolated way but by virtue of their integration with other capacities to form total behavior, so that a wide degree of compensation is possible, and, where an individual is high in irritability and excitability, a high intelligence and a desire for good human relationships will help him to control this. An individual of relatively low intelligence who is alert, not excitable, and has adequate energy can become an extremely useful citizen. And so there are all possible combinations of these six capacities which produce the tremendous range of human variants, and it is a matter of estimating the degree to which an individual possesses them, the way in which he has integrated one quality with another, in order to determine the probable degree to which he is subject to modification and thereby his ability to make a better adjustment to service conditions.

What, then, is the relationship of these fundamental capacities to the desirable qualities of submarine men and hospital corpsmen listed above? What qualities go into developing maturity? It is obvious that the hyperirritable, sensitive, easily stimulated individual is going to have a more difficult time in emancipating himself from the protection of his family, friends and community than the more phlegmatic recruit who takes things as they come and is not easily disturbed. Again, the individual with high affect, who has been dependent on the relationships with the people about him, his family and friends, may find himself lonely and unhappy in the recruit situation. The most mature men are those who are not above average in the capacity of irritability, are physically adequate, have average energy or drive, are not too dependent on human relationships, and have had some experience in taking care of themselves in an independent situation.

The ability to understand and accept discipline is really related to maturity, but the highly energetic, restless, driving individual has a much greater problem in restraining himself and accepting routine discipline than those who are less energetic. Also, the hyperirritable individual is more likely to resent discipline and criticism.

Aggressiveness is in direct relationship to the individual's ability to be aggressive. Aggression is a normal attribute of the human being and is a part of his instinctive

make-up. The physically well-endowed, energetic, reactive individual, with not too much affect, will prove the most aggressive, whereas the person who is continually thinking of the feelings of others, who does not like to hurt other people, who is easily hurt himself because of sensitiveness or hyperirritability, who is not too well endowed with energy, will not show aggressive characteristics.

What are the factors in producing honesty? Again, honesty is the result of the courage to be honest; and dishonesty will be found in the nervous type individual, the individual who is fearful, afraid of his ability to maintain his convictions or to do the hard work necessary to an honest effort.

It becomes apparent that for the good sailor under combat conditions, physical fitness, good energy, drive, determination, not above average excitability, not above average affective capacity, somewhat better than average curiosity and alertness, and intelligence of the high school level are desirable in anybody who expects to rise above the seaman level, with the highly technical problems confronting him. For the hospital corpsman, he must be an individual who is sufficiently excitable and reactive to feel situations and move quickly in them, but one who is not going to react with too intense feelings. He must have adequate energy, but it need not be of the highly aggressive variety; rather it should be a type that can be expended in somewhat smaller amounts over a prolonged period. He is never called on for sudden, intense effort, but must keep up a persistent effort over long periods. He must have better than average affective capacity or he will not have the necessary interest in the patients under his care. He must be above average in mental activity or he will not be able to learn the many and various technics necessary to a hospital corpsman, or to devise ways of meeting situations when short of the necessary materials. He cannot master the knowledge necessary without at least a high school level of intelligence.

Let us now examine some of the failures in the light of the necessary qualities to make for success:

ANALYSIS OF SOME OF THE FAILURES FOR SUCCESS

Corpsmen

1. (a) Low irritability, slow, phlegmatic.
(b) Low intelligence—10 years.
2. (a) Low intelligence—10 years.
3. (a) High irritability.
(b) High affect—immature, poorly developed, fear of evil, repressed and inhibited.
(c) Cyclothymic—periods of depression and periods of increased activity.
4. (a) High irritability. Poor reflex and instinctive control.
(b) Low affect.
(c) High intelligence.

5. (a) Exceptional physical development.
(b) Hyperirritable. Strong instinctive drives.
(c) Excessive energy and drive.
(d) High affect.
(e) High intelligence.
(f) Capacities poorly integrated and poorly controlled.
6. (a) Poor physical development.
(b) High irritability. Seasickness.
(c) High affect but immature and repressed.
(d) Low intelligence.
7. (a) Poor physical development. Bad acne.
(b) High irritability, anxious, sensitive, enuresis, fainting.
(c) Low energy or drive.
(d) High affect but poorly developed with withdrawn behavior.
8. (a) Poor physical development.
(b) Hyperirritable.
(c) Low energy or drive.
(d) High affect but immature, dependent, insecure.
9. (a) High energy.
(b) Affect poorly developed.
(c) Low intelligence.
10. (a) Hyperirritability.
(b) Low intelligence—10 years.

Prisoners

1. (a) Strong instinctual drives, aggressive, hostile.
(b) Low affect.
(c) Average intelligence.
2. (a) Poorly controlled reflex and instinctive behavior. Enuresis up to 15.
(b) Low energy.
(c) Dependent on mother.
(d) Low intelligence.
3. (a) Poor physical development.
(b) High irritability, autonomic instability, angio-edema.
(c) Low energy.
(d) High intelligence.
4. (a) Hyperirritability. Has enuresis. Anxiety, tension. Poor instinctual control.
(b) High affect—dependent, insecure, immature.
(c) Low mental activity.
5. (a) Poor reflex control. Enuresis up to 10 years.
(b) Low affect—inability to make relationships or be guided by them.
6. (a) Schizoid make-up, withdrawn, fantasy, preoccupied.
(b) Low intelligence.
7. (a) High irritability—enuresis up to 10 years, anxiety, tension.
(b) Low energy and drive.
(c) High affect but dependent and immature.
8. (a) Poor physical development.
(b) Poor energy or drive.
(c) Affect poorly developed, immature, dependent.
(d) Mental activity—no reasoning or judgment.
(e) Preschizophrenic.
9. (a) High irritability.
(b) High affect—poorly developed, immature.
(c) Low intelligence.
10. (a) High irritability.
(b) High affect.
(c) Low intelligence.

CONCLUSIONS

1. All psychiatric examinations of recruits should be made at the training stations. At the recruiting stations only the obviously incompetent can be weeded out, and examination is not necessary.

2. At the training station there should be an increased time for psychiatric examination, so that certain definite questions concerning the individual's behavior in relationship to his previous environment, his attitudes toward his family, his social activities, athletics and school work can be asked, and an initial estimate of his capacities and present temperamental status can be made, noted, and sent to his company commander.

3. If the time at the training station is to be reduced, then the larger part of the training must take place after the recruit is sent to duty, so that the major emphasis at the training station should be on getting to know the man and his capacities in order that a wise selection can be made.

4. The company commander should immediately start checking on the observations made by the psychiatrist at the time of induction and should be aided in setting up test situations to demonstrate physical ability, excitability, energy and drive. Every week he should check on his observations and, at the end of the training period, make definite recommendations for the type of duty to which that recruit is to be sent. This should be detailed as to the kind of ship, whether submarine, destroyer, cruiser, or battleship; whether the recruit is fit for combat conditions on the ship or should be at sea in a situation where emergencies are unlikely to arise; whether the recruit would do better in some type of shore duty.

5. The company commander, at the end of the training period, should meet with the psychiatrist and they together should make the final selection for the type of duty.

6. In order that no human material shall be wasted, there should be formed labor battalions and work details connected with hospitals where closer observation is possible, where men of doubtful capacities can be sent for further training and observation, with the idea that ultimately they will be able to undertake more active duty.

7. A system should be worked out so that duties can be shifted and, where a man is found unfit for destroyer duty or some other special duty, he will not have to be surveyed from the Navy, but can be transferred, at least temporarily, to some other duty for which he is more capable.

8. It should also be possible, where men are showing signs of nervous exhaustion either through anxiety, apathy, or through various somatic symptoms, that they can be sent ashore for periods of three weeks or a month and then again returned to duty.

CHAPTER 3

THE VALUE OF THE SOCIAL SERVICE HISTORY IN THE DETECTION OF THOSE PSYCHIATRICALY UNSUITED FOR MILITARY SERVICE*

A STUDY OF 500 ENLISTED MEN

During World War II much attention was devoted to the development of methods for facilitating the early elimination of the potential neuropsychiatric casualty from the military service. Although the need for a careful psychiatric interview at time of induction was recognized, such interviews were in reality very brief and often quite inadequate. Thus it was suggested (Billings, E. G., Ebaugh, F. G., et al., *War Med.* 4:283-298, September 1943) that social-service histories for each inductee be made available to the examining physician as confidential information, with the hope that such material would be helpful in detecting the psychiatrically unfit. In a previous study (*U. S. Nav. M. Bull.* 43:909-921, November 1944) it was thought advisable to have such histories include the following data: (1) Character of the man's family relationship; (2) history of mental illness in the family; (3) persistence of infantile traits, such as enuresis, marked fears, temper tantrums, nightmares, etc.; (4) history of previous mental illness afflicting the man himself; (5) educational history, adaptability, truancy, scholastic record, etc.; (6) social adjustment in the community, participation in group activities, any peculiarities of personality, etc.; (7) criminal record; (8) employment record; (9) use of alcohol and other drugs; and (10) degree of emancipation from the home. There was little information concerning the effectiveness of such histories in actually identifying those who might develop mental illness under the strain of service life.

The purpose of this study is to test the usefulness of social-service histories as a supplement to the neuropsychiatric examination of inductees for military service. Five

hundred enlisted men (U. S. N., U. S. M. C., U. S. C. G., regular and reserve) were chosen at random from among the patients admitted to St. Elizabeth's Hospital, Washington, D. C., from January 1942 to May 1944. It was assumed that each man presented a normal enough appearance at the induction center to be accepted for military service, and that any rejections from this group would have been made entirely on the basis of findings revealed in the social-service histories. In reviewing these cases we attempted to base our decision for acceptance or rejection on the data in such histories. Certain defects of this method of study are apparent. The social-service history taken after a man has been hospitalized (as in these cases) may be more complete than such a history prepared for use at the induction center, many facts being more willingly revealed after the illness is manifest than before. In some cases the history may not in itself afford enough information to warrant rejection, but may be suggestive and justify a request for further material. In the cases reviewed here we have attempted to keep in mind the practical considerations faced by the hurried physician in the induction line, the urgent need for men in the armed services, the brief time allotted for examination, the pressure exerted by the community that often resents the rejection of the man who may seem fit for duty to the eye of the layman, and the still persistent attitude in some places that the ne'er-do-well, the chronic behavior problem should be sent into the military camp as a corrective or disciplinary measure. Hence, we have not rejected cases lightly and have passed some with considerable reluctance, doubting their ability to make a satisfactory military adjustment, but realizing that in actual practice some doubtful candidates would still justify a trial of duty.

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Chapter 3.—THE VALUE OF THE SOCIAL SERVICE HISTORY

TABLE 1.—*Diagnoses of 500 unselected enlisted men hospitalized at St. Elizabeth's Hospital (January 1942 to May 1944)*

Diagnosis	Percent
Schizophrenia (dementia praecox).....	72.0
Manic depressive psychosis (manic).....	8.3
Manic depressive psychosis (depressed).....	3.4
Involuntional melancholia.....	.6
Paranoia.....	.6
Unclassified psychosis.....	10.3
Psychopathic personality with psychosis.....	1.0
Psychosis with alcoholism.....	1.0
Psychosis with epilepsy.....	0.4
Psychosis with mental deficiency.....	1.0
Paresis.....	.4
Psychosis associated with trauma.....	.6
Psychoneurosis.....	.4
Total.....	100.0

The diagnosis of the 500 cases studied are shown in table 1. The striking feature of this grouping is the large number diagnosed as schizophrenic. A similar distribution of diagnoses was found in the group of men that would have been rejected as the result of findings in their social-service histories. In this study there is no evidence that it is easier to eliminate (by social study) one prepsychotic type than another. It should be noted that almost all of the cases studied here are psychotic, and thus any conclusions may not necessarily be applicable to the psychoneuroses.

TABLE 2.—*Length of active military service of 500 unselected enlisted men prior to hospitalization at St. Elizabeth's Hospital (January 1942 to May 1944)*

Length of service	Number of men	Percent
Less than 10 days.....	56	11.2
10 to 30 days.....	46	9.2
1 to 3 months.....	73	14.6
3 to 6 months.....	73	14.6
6 to 12 months.....	98	19.6
1 to 2 years.....	87	17.4
2 to 4 years.....	44	8.8
More than 4 years.....	23	4.6
Total.....	500	100.0

The distribution of the 500 men as to length of service is shown in table 2. As in previous reports by various authors, the short length of service of the majority of those who become mentally ill is emphasized. Thus 20.4 percent were hospitalized with service of less than 1 month, 49.6 percent with less than 6 months, and 69.2 percent with less than 1 year.

On the basis of the social-service history, an attempt having been made to carefully evaluate the 10 factors previously noted, 178 (35.6 percent) of the 500 men would have been rejected. In table 3 is shown the distribution of these men according to length of active military duty. In this group, as would be expected, is noted an increase in those with only brief periods of service (compare with table 2). Thirty-three and seven-tenths percent had less than 1 month of duty before hospitalization. 69.1 percent less than 6 months, and 84.8 percent less than 1 year. Those with the more obvious mental defects, revealed by the short social histories available, seemed to have a greater chance of becoming mentally ill in a shorter period of time than those whose abnormalities had not been so grossly manifest.

TABLE 3.—*Length of active military service prior to hospitalization for a mental illness of 178 enlisted men who would have been rejected for military service on the evidence revealed in their social-service histories*

Length of service	Number of men	Percent
Less than 10 days.....	31	17.4
10 to 30 days.....	29	16.3
1 to 3 months.....	33	18.5
3 to 6 months.....	30	16.8
6 to 12 months.....	28	15.7
1 to 2 years.....	21	11.8
2 to 4 years.....	5	2.8
More than 4 years.....	1	.6
Total.....	178	100.0

The major reasons for the rejection of the 178 men are shown in table 4. Those who had been previously hospitalized because of a mental illness or who showed definite evidence of a pre-existing psychosis or severe neurosis were rejected on that evidence alone. Other rejections were made, not because of a single behavior abnormality or personality defect, but only when an individual had displayed a number of such abnormalities, suggesting a grossly unstable personality which had never been able to effect an adequate social adjustment. The same individual, therefore, may be listed under several categories in table 4.

It is of interest to note that of the 178 rejected, 100 (56.2 percent) were considered to have had definite psychotic episodes prior to induction. Of these, 6 had had more than one previous mental hospitalization (2 men had each been committed to mental hospitals on three previous occasions, 2 had been treated with insulin shock, 1 with electric shock, and 1 had received insulin shock followed by a prefrontal lobotomy. At the time of their previous hospitalizations, 22 were diagnosed as schizophrenic, 6 as manic-depressive, 1 as paretic, 3 as alcoholic,

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

TABLE 4.—Major reasons for the rejection for military service of the 178 men under study

Reason for rejection	Number rejected	Percent rejected
Previous hospitalization for mental illness.....	38	21.3
Previous psychotic episodes (not hospitalized but under physician's care).....	16	9.0
Previous psychotic episodes (no medical care received).....	46	25.8
Convulsive states	7	3.9
Chronic alcoholism	19	10.7
Severe psychoneurotic traits.....	31	17.4
Mental deficiency	22	12.3
Markedly peculiar personality.....	22	12.3
Enuretic at time of induction.....	14	7.9
Previous criminal record.....	15	8.4
Inability to adjust in school.....	50	28.0
Chronic behavior problem in community.....	10	5.6
Illiterate	3	1.7
Previous suicidal attempts.....	7	3.9
Previously discharged from military service (bad conduct, inaptitude, and for neuropsychiatric defects)	8	4.5
Previously rejected as unfit for military service.....	3	1.7
Miscellaneous (recent pulmonary tuberculosis, severe birth injury with residual defects).....	2	1.1

while 6 were either unclassified or the diagnosis was not available. Of those hospitalized previously, 81 percent became ill again before they had served a year on active military duty. At the present time it is our opinion that the history of a previous hospitalization for a mental illness, or the existence of any such illness of great enough severity to require prolonged psychiatric care or discontinuance of normal activities for any length of time, are adequate reasons for rejection for military service.

It seems clear on the basis of other observations as well as this small study, that even with adequate social-service histories only some of those men who will develop a severe mental illness soon after their entry into military life can be detected and eliminated at the induction centers. We must acknowledge that as yet we have no very accurate means for complete evaluation of the potentials of the human personality. We cannot hope to identify all those who will at some time suffer a mental disability, any more than we can predict accurately which man will distinguish himself under the strain of some military emergency. There may be a "breaking point" for every man, a point at which the personality retreats before the attacks made upon it and seeks refuge in the cloak of a psychosis or other mental disturbance. With our present skills and means of measurement such a "breaking point" can be foreseen in only a comparatively few men. Yet we should devote every energy to the elimination of those who will become incapacitated after only a short period of service. If one-third of these can be detected (35.6 percent in this study), the use of the social-service history would seem quite justified.

Much of our emphasis during the early months of the

war was on the problems of induction, and the psychiatrist worked to identify and eliminate the potential psychiatric casualty, and to facilitate his service discharge. These are important functions, but as the list of neuropsychiatric casualties increased and greater numbers of such men returned to civil life, we became increasingly aware of the problems incident to that return. Such problems are by no means solved by discharge alone, as the psychiatric patient is notorious for his tendency to require prolonged hospitalization, to suffer a recurrence of his illness, and in many cases to become a public charge. It is becoming increasingly important to turn our attention to the problems of treatment and rehabilitation, hoping to aid him who has been mentally ill in making a satisfactory social adjustment that will enable him to maintain himself without constant resort to public aid.

SUMMARY

1. A study was made of 500 unselected psychotic Navy, Marine, and Coast Guard enlisted men admitted to St. Elizabeth's Hospital, Washington, D. C., from January 1942 to May 1944.

2. Social-service data in each case were reviewed to determine how many of these men would have been rejected at the time of induction had such data been available then.

3. On the basis of findings in the social-service histories 178 (35.6 percent) of the 500 men would have been rejected for military service.

4. Of these 178 men, 100 (56.2 percent) were found to have had previous psychotic episodes prior to induction, 21 percent having been previously hospitalized because of a severe mental illness.

5. It is believed that a social-service history would be a valuable adjunct to the psychiatric examination made at the induction center.

6. The need for the early elimination of the potential

psychiatric casualty is emphasized by the short period of service such patients have before their entry to a hospital (69.2 percent less than 1 year), the length of hospitalization required, and the great difficulties encountered in rehabilitation.

CHAPTER 4

PSYCHIATRIC SELECTION AT THE PRECOMMISSIONING LEVEL¹

The problem of assembling and training ships' crews for new naval construction resulted in the conversion of one of the naval training stations into a precommissioning ship. Here were gathered ships' crews for advanced training while waiting the completion and commissioning of their ships, the men coming from various naval sources, such as from training stations, from service schools, and from previous duty either ashore or in the fleet.

With the change in function from that of training station a question arose concerning the need for continuing a psychiatric unit. There were good grounds for assuming that such a unit would be necessary, and that re-examination of the precommissioning men would reveal many who were unfit because of neuropsychiatric defects. It is inevitable that the screening procedure at the training stations should make mistakes and pass on some unfit men to the fleet. Thus, of the recruits discharged for inaptitude when the station was a recruit training camp, about 15 percent represented cases which were missed during the original screening examination and were referred to the psychiatrist later.

In addition to the persons who are missed at the training station level, there are some disorders which require a period of incubation before they are noticeable. This is particularly true owing to the increase of intrapsychic tensions in the green recruit when sea duty becomes imminent, as occurs when he is finally assigned to a ship's crew. Finally, with many men coming from the fleet there inevitably will be cases of service-connected disability such as combat fatigue, posttraumatic personality disorder, and traumatic epilepsy.

In previous writings the authors² discussed the need

for such periodic re-examination. Experience demonstrated amply the pressing need for psychiatric selection at this level.

The psychiatric program as finally evolved resembles that in practice at the recruit level with the exception of certain changes in standards, and in the procedures for separation from the service. It soon became evident that many of the cases of neuropsychiatric unfitness were fairly obvious ones which could be detected immediately upon the arrival of the men at the station, and it was decided after some experimentation to institute a psychiatric screening procedure to which every man entering the station would be subjected. The shortage of personnel made it impossible to give each man a special psychiatric interview, so the men were tested by a paper and pencil test with only the high scorers on this test receiving a personal interview.

An experimental run on over 1,000 cases showed that screening in this fashion would result in the detection of 80 percent of the eventual casualties during the training period, while necessitating the interview of only a quarter of the incoming population. Only about 25 percent of the men tested score high on this test, and it is the function of the psychiatrist in a brief personal interview to separate among this 25 percent those who are true neuropsychiatric problems from those men who have been mistakenly identified as such by the test.

As a result of this interview men suspected of neuropsychiatric defects are either sent to the observation ward for study preliminary to receiving a straight medical survey or a survey to limited shore duty, or they are sent on to duty for a trial period and reinterviewed later. Since most of these men have had some length of service in the Navy and represent quite an investment in terms of training, every effort is made to salvage as many for further service

¹By Cecil L. Wittson, Commander (MC) U.S.N.R., and William A. Hunt, Commander H(S) U.S.N.R.

²Wittson, C. L.; Harris, H. I.; and Hunt, W. A.; Evaluation of brief psychiatric interview. *J. Psychol.* 16:107-114, July 1943.

as possible. The granting of a medical survey for neuropsychiatric disability is a serious matter and not to be taken lightly, and it has been the policy of this station to survey only those men who are obviously unfit and whose unfitness is clearly demonstrated by their social histories and by their record in the naval service. The procedure of investigation and observation are largely those which were in use when the training station was a recruit station, and which have been described elsewhere.³ The main difference comes in the greater time and attention that must be given to the survey cases, and in the different method of disposition, because these cases now go through a regular board of medical survey rather than through the Aptitude Board.

As only the most severe cases are admitted to the psychiatric ward directly from the screening examination, a heavier burden is thrown on trial duty, referrals, and consultations than was typical of the recruit program. This increases the necessity for giving ships' officers general indoctrination into the necessity and operation of psychiatric selection. Fortunately all officers arriving on the station spend the first week after their arrival in indoctrination school where they are made familiar with the pre-commissioning program. As a regular part of the indoctrination a member of the psychiatric staff delivers a lecture to the officers on the necessity for psychiatric screening, recognition of common psychiatric cases, and the mechanics of referring such cases to the observation ward. This has resulted in excellent cooperation from the line and medical officers of the various ships' details.

As was typical of the procedure under the recruit training program all patients in need of immediate hospitalization are transferred to a naval hospital. Transfer to a hospital is also utilized for those who need medical treatment not available under present facilities, and when there is every indication that the administration of therapy would produce beneficial results, as likewise where the man's difficulties are thought to have been aggravated by his naval service. This results in a relatively greater number of hospital transfers than was necessary in the handling of recruits. Analysis of the cases handled demonstrates three sources from which they come and may be illustrated by case reports.

CASE REPORTS

Mistakes of Training Station Selection

Case 1.—A youth with a mental age of only 10 years, whose mental deficiency was further complicated by his illiteracy, could read only at a first-grade level. School and work records were

poor. At the training station he was transferred to a school for illiterates. When he showed no progress after 5 weeks at this school, he was transferred here for assignment to a combat ship. Here he was unable to perform his duties as a crew member and was referred to the psychiatric ward by his ship's medical officer. He was surveyed as a mental deficient.

Case 2.—This man was unstable with a long history of maladjustment previous to enlistment. He once had gastric ulcers, and had been under treatment by his local physician for his "nervous condition." A few days after his arrival at the training station he became very nervous and was sent to sickbay by his company commander. Here he was placed under sodium bromide sedation for the remainder of his recruit training, after which he was transferred to a precommissioning crew, where he was detected during the screening examination. He showed obvious signs of a severe anxiety state and was admitted to the ward for survey.

Case 3.—A youth who had a history of occasional grand mal seizures previous to enlistment had been under treatment by his family physician. He concealed his condition at the induction center and later when he arrived at the training station. He had two mild seizures during his boot training and was referred each time to the sickbay for treatment. The epileptic symptoms, however, were not recognized and he was treated for syncope. He was detected during screening examination and was surveyed when the diagnosis of epilepsy was confirmed by the social history and by an abnormal electroencephalogram.

Conditions in Which a Period of Incubation Is Necessary

Case 1.—This man was unstable with a history of mild anxiety before his enlistment. During his recruit training he was very anxious and depressed but did not seek medical attention. During the screening examination upon his arrival at the station his condition was detected, but it was thought to be simple nostalgia and he was given superficial therapy and sent to duty. By the end of 2 weeks a situational depression of considerable depth had developed accompanied by severe headaches and vomiting of a functional nature. He was surveyed.

Case 2.—This man had a history of a suicidal attempt 5 years previously. He concealed his history when he was inducted. During his recruit training he became anxious and apprehensive but did not seek medical attention. Following recruit training he was sent to service school where it was necessary for him to seek medical attention for his condition. He was given sedatives for several days. His condition became aggravated and upon his transfer here he was immediately detected during the screening examination. He was exceedingly tense, anxious, and apprehensive, and confessed to a return of suicidal thoughts. He was transferred immediately to a naval hospital.

Case 3.—This person was unstable with a history of extreme nervousness and maladjustment before enlistment. He had never sought medical attention in civilian life. He was detected during the screening examination at his recruit training camp and was admitted to its psychiatric observation ward. There his condition improved somewhat and he requested a chance to serve. As a result he was sent to duty. His condition became aggravated during a period at service school and upon his transfer here he was detected immediately during the screening examination and referred to the psychiatric ward for survey.

Service-connected Disabilities

Case 1.—This man had received a fractured skull when tossed to the deck by the concussion of a shell explosion. He was hos-

³Wittson, C. L.; Harris, H. I.; and Hunt, W. A.: Detection of neuropsychiatrically unfit. U. S. Nav. M. Bull. 40:340-346, April 1942.

pitalized for 1 month and then returned to duty. For a while he had headaches but these were infrequent and less severe with time. Six months later while at a shore station his headaches began to occur more frequently and with greater severity. Shortly after this he had two convulsive episodes. He was allowed to continue on duty but was under outpatient observation at a naval hospital when he was suddenly transferred here. He was detected at the screening examination, but until his health record could be checked and an electroencephalogram obtained he was sent to duty. Before this could be done, however, he had another seizure. He was transferred to a naval hospital.

Case 2.—This young man's ship had been torpedoed. While in the water he received severe internal injuries attributable to exploding depth charges. These necessitated his hospitalization for 6 months. He received attention for his physical injuries but no psychiatric examination was made. When he was physically sound again, he was returned to duty and sent here. He was detected in the receiving examination as tense, anxious and apprehensive. Further observation showed him to be suffering from severe combat fatigue and he was transferred to a naval hospital.

Case 3.—This youth's ship was torpedoed while he was in his bunk. He escaped but spent 12 hours in the water before he was rescued. He was shipped back to the States and given a 30-day leave. During the leave, insomnia, restlessness, anorexia, and terror nightmares developed, despite which he did not seek medical attention. At the end of his leave he was assigned to a new cruiser but during the shakedown cruise he found that his anxiety symptoms were aggravated, and that he was unable to sleep below decks. He asked for transfer from the ship and was sent here. His obvious anxiety was immediately noticeable during the screening examination. He was diagnosed as having severe combat fatigue and was surveyed to shore duty.

Tables 5, 6, and 7 analyze the men separated from the service, surveyed to limited shore duty, or transferred to a naval hospital from this activity during the month of July 1944. Table 5 shows the relative percentages referred for disposition from various sources. It will be seen that the original screening examination is the largest source. The large numbers referred from other sources in part reflect our liberal trial duty policy. Table 6 lists the diagnoses established in the order of their frequency. Table 7 gives the length of service of the men. It is significant that one-third of these patients had less than 4 months' service in the Navy.

The opportunity for the indoctrination of line officers in the principles of neuropsychiatric selection is one of the most important aspects of the selection work at this precommissioning station. The original neuropsychiatric selection program was instituted by a joint directive from the Bureau of Naval Personnel and the Bureau of Medicine and Surgery to the commanding officers of the various naval training stations. Unfortunately it was not possible to instruct the line personnel of the Navy in the philosophy and practice of military selection at the time the program was instituted, and since the program was

TABLE 5.—*Sources of referral for cases separated from service, surveyed to shore duty or transferred to hospital July 1944*

Sources	Percentage of total cases
Screening	32.0
Main sickbay	31.0
Detail sickbay	22.0
Captain's mast	9.0
Self referral	4.0
Chaplain	1.0
Classification officer3
Battalion commander3
Dental department3

TABLE 6.—*Diagnoses established for cases separated from service, surveyed to shore duty or transferred to hospital July 1944*

Diagnosis	Order of frequency
Constitutional psychopathic state.....	1
Emotional instability.	
Inadequate personality.	
Schizoid personality.	
Paranoid personality.	
Psychoneurosis	2
Mixed.	
Anxiety.	
Hysteria.	
Situational.	
Psychasthenia.	
Unclassified.	
Traumatic.	
Fatigue	3
Combat.	
Operational.	
Mental observation	4
Posttraumatic cerebral syndrome.....	5
Epilepsy	6
Constitutional psychopathic inferiority.....	7
Without psychosis.	
Dementia praecox	8
Mental deficiency	9
Moron.	
Psychosis	10
Unclassified.	
Manic depressive.	
With psychopathic personality.	
Posttraumatic personality disorder.....	11
Left ear deafness, infection.....	12
Keratitis	13
Paralysis	14
Right facial nerve.	
Enuresis	15
Nystagmus	16

begun in naval training stations there was little understanding of it among those in command at sea. The various ships' officers' impressions were formed largely

through whatever discussion appeared in public print, and this unfortunately often gave a distorted picture. Here at the precommissioning station where officers and men are gathered prior to their being assigned to new construction it is possible for the ships' officers to see neuropsychiatric selection functioning in relation to their own personnel problems. It is no longer an abstract question, but becomes a concrete matter of handling the disposition of men whose unfitness for sea duty becomes apparent to their officers during this final training program. Under these circumstances the line officer is getting new insight into the meaning of psychiatric selection through his direct participation in the functioning of the program. The response has been enthusiastic.

There exist, however, many borderline cases of persons who are temperamentally unfit for military service and who are unable to adjust adequately to the demands of an efficient naval organization but nevertheless do not fall clearly into any medically diagnostic category. A man may be discharged by reason of medical survey only when a

clear medical condition exists and a diagnosis can be established. Despite the fact that many of these borderline cases are not medical problems in the usual sense, they remain unfit for service and their unfitness becomes apparent the minute they undertake duty at sea. As a result once their unfitness is discovered, they are disposed of by transfer to another ship. In this way a floating population is set up which is transferred from ship to ship, finding no welcome anywhere. This has been observed here at this station where men have been on the psychiatric ward and sent back to duty because it was impossible to handle them by medical survey despite the psychiatrist's personal opinion that they were unsuited for service. Regularly a few months later these men were seen once more at the precommissioning station in a draft from sea for assignment to another vessel. There is one group of approximately 6 men; these are now in their third crew within 6 months. No one wants these men because of their unsuitability; yet it is impossible up to the present date to eliminate them through the channels of medical survey as they are not a medical problem.

TABLE 7.—Length of service of cases separated from service, surveyed to shore duty or transferred to hospital July 1944

Length of service	Percentage of total cases
More than 1 year.....	32.0
More than 6 months.....	10.0
6 months or less.....	7.0
5 months or less.....	4.0
4 months or less.....	11.0
3 months or less.....	25.0
2 months or less.....	10.0
Less than 1 month.....	.3
Unknown6

SUMMARY

Nine months of neuropsychiatric selection at a precommissioning level has shown the value of such a program. Many unfit men are found at this level and their elimination is essential to an efficient fighting organization. No ship is better than the crew that fights it and a neuropsychiatric problem among her personnel strikes directly at her efficiency and morale. The importance of the men's physical condition is recognized in the principle of physical re-examination at regular intervals. Experience at this station would suggest that a regular psychiatric re-examination would be of equal value and importance.

CHAPTER 5

THE MENTAL DEFECTIVE AND THE UNDER-AGE MAN IN THE NAVY*

Probably one of the most difficult groups of individuals to be understood by the layman, and the most often mishandled through such misunderstanding, is the mental defective group. Because their severe limitations are so frequently obscured by their age, and by their often average and pleasing appearance, these individuals are commonly considered merely "delinquents."

The world of the mental defectives is a simple world, due to the limitations of their abilities to learn new things, to comprehend what takes place about them, to retain and assimilate cultural stimulations, and above all to be able to be self-directive in a new setting. An attempt to force such an adaptation upon these individuals is made when they enter the service. The degree of difficulty resulting from the strangeness or unfamiliarity of this new setting, as well as the understanding of the officers or men in charge of them, determines to a great extent how they will adjust themselves to this new life and its demands. Because of the wide contrast between their simple civilian cultures and the complexity of a mechanized war, their adaptation to productivity for the armed forces is more or less a failure. The amount of supervision and direction required by them is not commensurate with their output for service.

Often the mental defective who has escaped recognition during the early part of his Navy career eventually becomes a disciplinary case. He probably will respond to the mild discipline administered for his petty offense, both the offense and the purpose of the discipline being understood by him. Many times, however, other offenses committed have childlike motivations, and since his own childlike reactions to the thwartings are stronger than any sense of duty that he could comprehend, he easily becomes a serious naval offender, chiefly AOL (Absence Over Leave) or AWOL (Absence Without Leave). His mis-

fitness becomes an ever-present administrative problem, when he is retained in the service. The few who have not become involved in discipline might well be those whose assignments are yet quite simple and in line with their aptitudes. Acceptable efficiency on a low routine job must not presuppose a universal and versatile efficiency.

The aim of this chapter is to present briefly some important factors peculiar to the mental defective with the implications of these factors in the disciplinary handling of the individual. The almost parallel problem of the under-age offender in the Navy will also be considered.

Mental deficiency is considered as a state of (1) social incompetence resulting from a state of (2) mental growth arrestment which has been (3) developmental in nature. When these criteria have been satisfied, a diagnosis of mental deficiency can be advanced.

Psychometric test scores have tended to supplant the above criteria for mental deficiency. These scores must be handled and interpreted very carefully to be of any value.

Among the many psychologic tools devised for the purpose of measuring the attributes of human beings, the tools that measure personality are gradually proving to be helpful. Similarly tools for evaluating individual social competence or social maturity have been developed which are useful in establishing the state of incompetence among the mentally deficient, mentally ill and delinquent. The Vineland Social Maturity Scale developed at the Department of Research, The Training School, Vineland, New Jersey, has been and is probably the most successful to date. This scale permits the measurement of social development from birth up to maturity, a 25-year range. The degree and kind of incompetence is measurable and expressible in Social Age (SA) and Social Quotient (SQ) units. This tool offers a means of establishing the initial criteria of mental deficiency as well as a point of departure for any psychologic problem of adjustment.

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A detailed item analysis was made of the social competence (Vineland Social Maturity Scale) and of the mental competence (Wechsler-Bellevue Scale of Intelligence) of 35 mentally-defective enlisted men, many of whom were naval offenders. The ages of the men in this group ranged from 16.5 to 38.8 years. The diagnosis were not made on the fallacious "I. Q.," but were based on the criteria involved in the total definition of mental deficiency.

SOCIAL COMPETENCE

Social competence refers to the capacity of the individual to carry on the minimum essentials of everyday living without supervision or direction of others. This independence develops with and is measured according to progressive age levels, as is the development of intelligence. On the Vineland Social Maturity Scale this briefly includes: (1) Self-help items (general, eating, and dressing); (2) self-direction; (3) occupation; (4) communication; (5) locomotion; and (6) socialization—all common elements and minimum essentials to any individual's development to complete adult maturity or independence.

The analysis of the social maturity of the 35 mental defectives revealed that there were 8, or 23 percent, who did not carry out the bathing routine (not just showers) without the aid of supervision of wife or some member of the family; 2, or 6 percent, who could not comb and part their own hair; and 28, or 80 percent, who required assistance in completing the self-dressing routine (several were unable to tie their own neckties and neckerchiefs). All of these minimum essentials are perfected by normal children in from the 8th to 13th year.

Of this group 12, or 35 percent, were not trusted to go about their own home towns unaccompanied by parents, wife, or other trustworthy member of the family; and there were only 9, or 26 percent who were capable of going outside the limits of their home town to relatively unfamiliar places and of being responsible for their own arrangements. None of the 35 have traveled alone to remote towns or places. None was permitted to go out unrestrictedly at night and 29, or 82 percent, required supervision during the daytime.

Eight, or 23 percent, were unable to tell time to a quarter-hour accuracy. Thirty-four, or 97 percent, were able to perform routine household tasks under their own responsibility, while only 19, or 54 percent, reported work done about the neighborhood that merited payment, such as gardening, household tasks, or simple farm jobs. Twenty-two, or 62 percent, were performing some simple creative work on their own initiative such as making simple useful articles, doing simple repairs, gardening, raising

pets, or sewing. Only 3, or 9 percent, were performing responsible routine chores such as family chores, assisting in housework, or gardening. Thirty-four, or 97 percent, had not been gainfully employed at such occupations as servants, farmhands, laborers, or factory help, usually expected of boys and girls of 18 years of age.

Thirty-two, or 91 percent, of these individuals were able to write or print legibly their first name or full name without using copy, while 23, or 65 percent, were unable to write simple words from dictation, and 33, or 94 percent, were unable to write well enough to prepare brief notes to friends or relatives. Only one was capable of making a phone call without help.

Only 20, or 57 percent, were capable of handling money and making simple change in the purchase of useful articles, and had had experience in doing so; 31, or 88 percent, did not select or purchase minor articles of clothing such as socks, underwear, shoes or shirts, but had this done for them by mother or wife.

Thirty-one, or 88 percent, did not have their own spending money, amounting to a dollar or so per week, to spend on their own initiative or discretion. Inability to make simple change in small amounts is a not uncommon finding.

Five, or 15 percent, were unable to participate in simple table games observing rules; and 10, or 29 percent, did not engage in cooperative play such as baseball.

Sixteen, or 46 percent, still held to the belief in Santa Claus, and spoke enthusiastically about his reality.

These men are still small children in their capabilities, and their adjustment to the naval service has resulted in numerous administrative problems.

The social age and social quotient were calculated on each of these individuals. The range of social ages was from 6.3 years to 14.4 years, with social quotients from 31 to 69. These individuals, despite their real-life ages (range 16.5 to 38.8 years), are children ranging from childhood to preadolescence in degree of social maturity or independence, even with due consideration given to any influence a subcultural background may have had.

MENTAL COMPETENCE

A detailed item analysis was made of the quantity and quality of mental capacities measured by an individual intelligence test, but the findings are not reported here in detail. Mental incompetence also was revealed in all the cases on the Weschler-Bellevue Scale of Intelligence.

Another group causing numerous administrative problems is the under-age enlistment group. These youths have falsified their ages, and sometimes their names, but because of some physical precociousness have been believed and have been taken into the Navy.

TABLE 8.—*Social maturity and mental competence of 35 mental defectives*

	LA (Life age)	SA (Social age)	SQ (Social quotient)	MA* (Mental age)	IQ (Intelligence quotient)
Range.....	16.5-38.8	6.3-14.4	31-69	6.0-10.0	35-69
Mean.....	22.68	9.93	47.79	8.59	56.43
Mode.....	18.0	10.5	52	9.5	55

*Weschler, D.: *The Measurement of Intelligence*. The Williams & Wilkins Company, Baltimore, Md., 1939, p. 122.

The study of the development of intelligence from birth to its maturity shows that intelligence reaches its growth at about 14 to 16 years of age, as measured by the best standardized tests, although there may be improvement in the quality as maturation goes ahead. Hence for the normal under-age enlisted man it is highly probable that he reached his normal peak of mental development at 16 and will change but little in development when of adult age. Although he is poorly experienced for adult responsibility because of his youth, he might well be responsible for most of his actions as a naval offender from the intelligence angle, providing there are no other psychological anomalies of behavior and development present. In the normal well-adjusted 16-year-old lad, social maturity or social competence is quite apt to be at his normal life-age expectancy level, or even slightly above, providing there are no other complicating factors or circumstances.

With the mental defective, and especially with the group in whom the causation is endogenous (since few exogenous types enter the Navy), the picture is quite different. Intelligence here develops more slowly and reaches its low peak of maturity at different life-age periods. The peak of intelligence growth often hovers between the mental ages of from 9 to 12 years, and often below these age levels. Even with adult-life ages the mental ability has remained that of a child of the preadolescent level of development. Despite his real-life age, this level of intelligence and comprehension limits his ability to benefit or assimilate new experiences thrust upon him, when these experiences are at an adult level of expectation. It is not surprising that this is difficult for the layman to understand, because these mental defectives appear so mature physically, strong and often good looking, and yet are children of from 6 to 10 years mentally and in experience.

Similarly the social maturity or social competence of these individuals reveals that they are living and adjusting as children in an adult situation. With the conflict that results when demands of the adult or preadult levels are thrust upon children, the reactions are usually failure, disinterest and escape to a simpler level of adjustment. This, also, often is interpreted by the layman as planned delinquent behavior and severe discipline is given.

From this brief description the following questions might be raised:

1. As the Navy does not desire to take into the service normal boys under the age of 17 years, is it justified in retaining in the service mental defectives whose abilities are those of children much below that age?

2. The mental defective who enters the Navy offers to the service the best that he has. Since this "best" is too little to be useful to the Navy and of a quality which the Navy neither needs nor wants, should he be disciplined for this shortcoming over which he has no control?

3. Since mental deficiency and the resulting incompetence are inherent in the mental defective, long confinement as part of a disciplinary measure will not change the abilities to the extent of making him useful in the Navy. Should this not be considered in dealing with mental defectives who are given courts-martial with confinement and possible restoration to duty?

4. The normal under-age enlisted man who becomes a naval offender may possibly be granted clemency on account of his age, but being of normal intelligence and competence at his age level, might not discipline strengthen him and improve his maturity for the service?

5. Since age, intelligence, personality and physique are so often misleading in evaluating men, does not social maturity become a very important psychologic consideration?

CHAPTER 6

SUBNORMAL INTELLIGENCE IN THE MALADJUSTED NAVAL TRAINEE¹

PROBLEMS IN RECOGNIZING LOW INTELLIGENCE

One of the chief functions of the neuropsychiatric units at naval training centers is to separate the inapt and maladjusted individual from service as expeditiously as possible. Several articles have been written outlining the programs, problems, and procedures of these units (2) (6) (9). One of the duties of the psychologist at these units is the supervision and administration of psychometric examinations. He thereby becomes acquainted with the situations where low intelligence is associated with maladjustment.

The purpose of this chapter is to demonstrate the extent to which subnormal intelligence occurs in the cases considered unsuited for service, and further, to point out the tendency to overlook this factor in populations where it is presumably important.

The most apparent cases where maladjustment is due to intellectual limitations are those of the mental defectives. Although all who are obviously defective are rejected at naval recruiting or induction centers, a certain percentage of less obvious defectives reaches the naval training centers. Of all the recruits discharged from the centers as neuropsychiatrically unfit, the proportion that is definitely feeble-minded is small. The monthly average of mental defectives at the U. S. Naval Training Center, Sampson, N. Y., has ranged from 3 to 7 percent of those discharged for psychiatric reasons. A comparison of these figures with those obtained earlier in the war suggests that the screening at induction centers and recruiting stations improved. In the early months of 1942 twenty-seven percent of the men discharged from the U. S. Naval Training Station at Newport, R. I., were classed as mental

defectives (9). Though these figures are not directly comparable,² the trend is apparent.

Now, let the much larger group of cases that are not definitely defective but are of subnormal intelligence be considered. In the writer's experience as a psychologist at naval training centers several thousand discharged cases have been reviewed. Certain facts emerging from this experience are: (1) There is an unduly high proportion of cases of subnormal intelligence; (2) there is a widespread failure to recognize the extent to which the factor of low intelligence may be operative in maladjustment; and (3) low intelligence is not readily detected during recruit training. Data supporting these statements is given in the following discussion.

In confirmation of the first point the intelligence levels of 2 groups of discharges have been ascertained, using 2 separate measures of intelligence. The subjects in the first group numbered 101 and represented the complete run of unfit recruits discharged during 6 consecutive sessions of the aptitude board. For this group the Kent Battery was used. This is a brief, individual intelligence test which has had wide use at naval training centers. Its use has been described by Hunt, Lewinski, and others (3) (4) (5). Median mental age on the battery was used as a measure of intelligence level. The results are shown graphically in figure 1. In this figure the distribution of intelligence of the experimental group is contrasted with that expected in the normal population. For distribution of intelligence in the normal population, interpolation from the figure given by Wechsler ((7), figure 1, page 30) has been made. The validity of this comparison is supported by the study of Lewinski, in which he found a correlation of +0.727 between the Kent and Wechsler Bellevue scales (5). Examination of the figure shows that differences at any mental age level are gross. The neuro-

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²There were slightly different standards in that the Newport figure included some cases with mental ages between 10½ and 11 years. The Sampson figure includes only those with mental ages of 10½ and below.

psychiatric group has a strikingly high proportion of cases in all of the subnormal groups.

One might assume that if all obvious cases of low intelligence were excluded, neuropsychiatric cases would not show disproportionate weighting in the subnormal levels. To show that even this is not the case, another group was chosen. In this group the General Classification Test scores of 98 unfit recruits who also were given discharges were examined. Only those who had been referred to the neuropsychiatric unit after they had first completed a period of recruit training were considered. It is important to note that all of those who had appeared definitely defective or obviously unfit had previously been eliminated in the receiving-line examination. The General Classification Test is a written intelligence test given to all naval recruits for purposes of classification. The test is scored so that the average score in the normal recruit population is 50. The standard deviation is 10. The average score for this second group of discharges was 46. While the difference between this and the average recruit score is not as marked as differences shown by the first group, yet nevertheless the difference is statistically significant. The critical ratio of the difference between the scores of the selected group and the scores expected from the normal recruit population is 3.78. In examining the distribution

of scores it was found that over 50 percent of the group made scores of 45 or below. This group comparison would show that even after the brief psychiatric screening had eliminated the most obviously unfit, the group of neuropsychiatric discharges scores lower on intelligence tests than the normal recruit population.

Additional evidence of low intelligence as a factor in maladjustment can be cited from other sources. Some results obtained by the Special Tests Division of the Classification Department at one training center (1) are briefly summarized next. This office set up a psychological clinic to improve the placement of men in service. Individuals failing to adjust were referred to this clinic from various activities at the center and the most severely maladjusted cases in turn were referred to the neuropsychiatric unit for examination. Of those referred to that unit and subsequently discharged, two-thirds had made marks of 32 or below on the General Classification Test. In all, 95 percent of this low General Classification Test group were of subnormal intelligence.

Interviewing the recruits making low marks on the General Classification Test has been found to be a valuable supplement to the psychiatric screening procedures. In recent months at this center the Classification Department has administered a written personality inventory to the lowest scoring group on the General Classification Test. Cases indicating either a number of somatic complaints or a single symptom (such as enuresis) considered significant by naval criteria are referred to the neuropsychiatric unit. Approximately two-thirds of those referred are found to be definitely unsuited for service. It is of interest to compare this figure with that obtained from the group of men placed on trial duty following the initial psychiatric interview. At the screening interview individuals having complaints of a psychosomatic nature are placed on trial duty and are subsequently interviewed. In comparing this group with the low General Classification Test group over a period of several months a higher proportion of the low General Classification Test group was found to be unfit. One of the principal differences in the two groups was that the low General Classification Test group contained for the most part subjects of subnormal intelligence.

These results show that the neuropsychiatric discharges as a group are of lower intelligence than the normal population, but further analysis is needed to demonstrate the type of cases that is responsible for this difference. As stated elsewhere, the purpose of the examination at the psychiatric unit is to determine whether or not the individuals concerned are suitable for naval service. In some instances, cases may be discharged where unsuitability is demonstrated, yet a psychiatric diagnosis is not established.

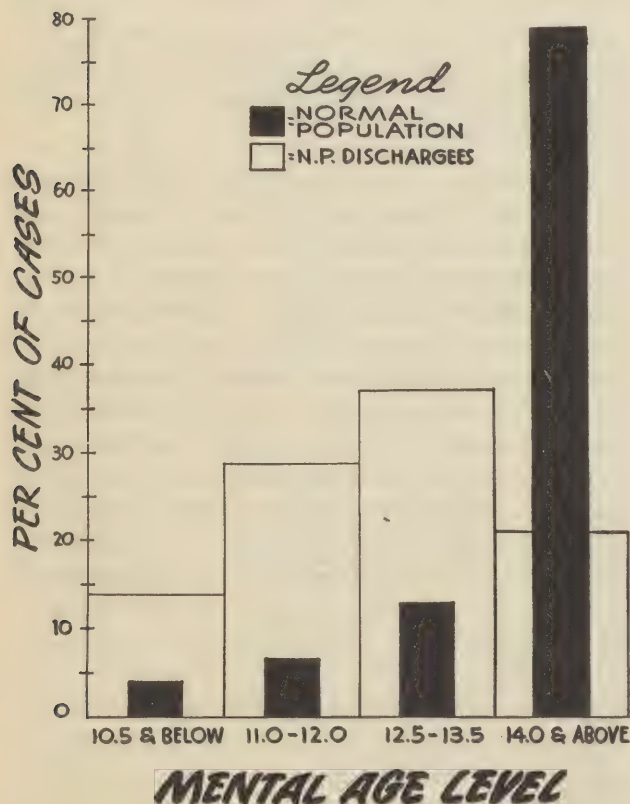


Figure 1.

Analysis of these cases is nevertheless fruitful as the reasons given for discharge represent the cumulative opinion of two or three psychiatrists, along with supportive material such as psychologic tests, social history, and company commanders' reports. Of all neuropsychiatric discharges the largest group by far is that termed personality disorder, in which the primary feature is inadequate personality. Psychiatrists most frequently term such cases as generally inadequate. Frequently allied to this descriptive term are those of emotional instability and emotional immaturity, dullness, little drive, nostalgia, and poor integration. In the majority of such cases there were a number of somatic complaints for which no organic basis has been found. These complaints may be of recent origin and may have been precipitated by separation from the home environment. The part of the body to which these complaints are referable is usually one in which the subject had experienced minor distress previously. Concomitant with the other spheres of inadequacy exhibited, there is often poor motivation for the service.

If the groups which were tested are considered and analyzed in terms of diagnosis or reason for referral, certain relationships between intelligence and diagnosis are readily apparent. Of the group that had been termed inadequate personality practically all had subnormal intelligence. In the majority of cases the diagnosis was established independently without knowledge of psychometric results. Of the cases diagnosed psychoneurotic, the majority had normal or superior intelligence. To illustrate this relationship the diagnoses in portions of the General Classification Test group previously mentioned might be analyzed and those that made scores of 60 or above compared with those making marks of 40 or below. (To clarify the comparison cases of neurological disorder, epilepsy, migraine, and schizoid individuals, as well as one mental defective, were eliminated.) In the high group, 80 percent of the cases was considered neurotic or reported to have anxiety states. One was discharged because of a personality disorder, emotional instability. None in the group was labeled as an inadequate personality. In the group making marks of 40 or below, 21 of 24 cases were termed personality disorders and 3 were classed as psychoneurotic. Of the 21 personality disorders, 17 (or 81 percent) were considered as inadequate, 3 as emotionally unstable, and in one case it was not certain whether schizoid features or those of inadequacy were more important. Of the 3 neurotics in the low group, 2 were cases of conversion hysteria.

The foregoing discussion might be summarized by stating that two separate measures of intelligence show a heavy weighting of neuropsychiatric discharges in the dull intelligence group. The majority of such cases fit into a category described as inadequate personality.

If low intelligence is an attribute of such a large number of cases unsuited for service, then one might assume that it is a factor which could easily be recognized by those without special training. This is not so.

The question of whether or not a recruit is making a good adjustment in training is frequently referred to his company commander. The company commander supervises and observes the recruit from the beginning of training through graduation. He observes him in all phases of his training activities. Replies to questionnaires about individuals on trial duty status from the neuropsychiatric units are given by the company commander. Most training centers have made extensive use of such questionnaires. The questionnaire used at this center refers to two aspects of behavior which were considered to serve as indicators of subnormal intelligence. One question is: "Does he learn easily?" The answer to this question for men who had made below 32 on the General Classification Test has been analyzed. In a group of 547 cases making below 32 in the General Classification Test, only 121 or 22 percent were noted as not learning easily. Yet a separate study (1) has shown that 95 percent of those making such scores were below the range of normal intelligence. As regards the second aspect of behavior in the same group only 22 percent was noted as being awkward in drill.

Learning ability generally has been found to correlate highly with intelligence test scores. Many studies upon this relationship have been made and, indeed, in defining the concept of intelligence many use learning as one basic part of their concept. However, it was observed here that there was little relationship between the judgments of learning in recruit training and intelligence test scores. Company commanders' reports were analyzed for a group of 888 cases which were referred to the psychologist for psychometric study. The Kent median mental age was obtained. The group was composed of men making below 32 on the General Classification Test so that practically all of the distribution falls below the average intelligence range. (The mental-age range was from 9 years to 14 years, and the mean mental age for the distribution was 10.7. The correlation (bis. r) between reports of learning and intelligence was $.020 \pm .030$. Statistically there was no significant relationship between reports of learning and intelligence. This corresponds closely to the findings of Wheeler et al. (8) in which a bis. r of $.09 \pm .04$ was obtained for a similar group.

It might also be expected that reports of awkwardness in drill in a group of subnormal intelligence would show some relationship to intelligence test scores. However, in a similar group of 918, the correlation (bis. r) between Kent mental age and the report of "not awkward in drill" was $.067 \pm .030$. (Mental age range 9 to 14 years and

mean mental age 10.7). Once again there was no significant correlation between intelligence test scores and reports of awkwardness.

In an effort to determine more exactly the conditions under which a recruit was observed, all company commanders in one regiment were interviewed. In the interview the following questions concerning the replies made to the questionnaire were presented: (1) Whether or not the reports were based upon first-hand observation of the men in question; (2) in what situations were their observations most frequently made; and (3) what aspects of a recruit's behavior determined their decisions as to his learning ability?

In regard to the first question the majority stated their reports were based upon first-hand impressions or else these impressions were supported by those of the assistant company commander. As to the second question, the majority stated that the principal situation in which observations were made was on the drill field. Other situations frequently named were conduct on work details, in the classrooms, and while on guard duty. Answers to the third question are related closely to the second. Since most observations were made upon behavior on the drill field, the most frequent signs of learning difficulties were slowness or failures to properly carry out the orders given. Other characteristics of a recruit's behavior frequently cited as determiners in judgments were the type of questions asked, whether or not he kept his gear in an orderly manner, and his personal neatness and military bearing.

Certain conclusions may be made in regard to judgments of a recruit's learning ability: (1) Most reports are based on observation of the recruit on the drill field; (2) observed slowness and failures in executing commands given on the drill field were not related to intelligence in the group studied; and (3) if an individual of subnormal intelligence is alert, of neat appearance, and if he does not expose his intellectual limitations by asking questions, his low intelligence will most probably not be detected while in training.

A general failure to note deficiencies in intelligence is also shown by various staff officers who refer recruits for examination. Aside from those recruits noted in the psychiatric screening interview, the second most common source of referral is from the medical dispensaries. Analysis of the examining psychiatrist's reports on referral sheets shows that the majority of inadequate individuals of subnormal intelligence are referred because of persistent somatic complaints for which no organic basis has been found. In the group that is of subnormal intelligence it is relatively rare that deficiencies in this part of the individual's personality are noted. The same statement holds

true in regard to those referred by chaplains and other officers.

SUMMARY

An unduly high proportion of subnormal intelligence is found among the maladjusted recruits who are subsequently discharged from service for neuropsychiatric reasons. This is true even when mental defectives are excluded. Two group studies are reported in which the greater incidence of low intelligence among discharges is shown. Other evidence corroborating these studies is also given. Cases accounting for the increased weighting at subnormal levels are most frequently termed inadequate personalities and low intelligence therefore appears to be one of the more constant attributes of such cases.

Even though low intelligence would seem to be an important factor in adjustment failures, it is seldom recognized. When inadequates of subnormal intelligence are referred to the neuropsychiatric unit, the factor of low intelligence is not often noted. Also, in a group of cases where 95 percent was of subnormal intelligence, only 22 percent was noted as learning slowly by the company commanders. If low intelligence could be recognized with any degree of accuracy one might expect some correlation between reports of recruits' learning and intelligence. However, analysis of a large number of cases shows that there is no significant relationship between reports made of learning in recruit training and intelligence.

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CHAPTER 7

PSYCHOSES IN NAVY INDUCTEES WITH LESS THAN FIFTEEN DAYS ACTIVE DUTY*

NEED FOR EARLY ELIMINATION OF POTENTIALLY PSYCHOTIC

Only a comparatively small number of psychiatric casualties were treated near battle areas and returned to full duty status. Those who treated such casualties in the North African theatre were able to send fairly large numbers of neurotic individuals to limited duty, but recommended only a very small number for further participation in actual combat activities. Psychotic cases were all returned home for hospitalization and eventual discharge.

As has been pointed out many times the man who must be hospitalized because of a mental illness is not only one of the most difficult of medical problems, but is in addition a military and social responsibility of no little degree. The man aboard ship or on land who succumbs to a nervous ailment becomes at once an element destructive of group morale, as in him his companions see an intensified reflection of their own fears and insecurity. The psychiatric casualty, therefore, must be quickly evacuated, and in most instances, must travel far into the interior before adequate facilities for his care can be provided.

Complete rehabilitation for military service is as yet the exception rather than the rule, and the majority of neuropsychiatric patients receive medical discharges after periods of hospital care usually exceeding in duration those given to any other type of patient because of the tendency toward chronicity and recurrence of mental illnesses. During the years since 1918 there has come an increasing realization of the financial cost, to say nothing of the personal tragedy of neuropsychiatric casualties. We have learned that a mental illness is sixteen times more likely to result in permanent disability than are other diseases (1) and

that each such case from World War I has cost the country about \$30,000 to the present time. In June 1940 there were 33,016 neuropsychiatric patients in 27 Veterans' hospitals in the United States, forming over 50 percent of all beneficiaries under treatment in all of the 179 Veterans' hospitals then operating (2).

Such facts assume greater significance when we realize that a man suffering from a neuropsychiatric disorder tends to break down comparatively early in his military career, and hence has in many cases contributed relatively little as a member of his service group. An analysis of patients discharged from an Army camp for neuropsychiatric reasons showed that 50 percent were disabled in the first month of service, 75 percent in the first 2 months, and 97 percent within 6 months (3). In such cases the expense of the man's training and maintenance is completely wasted, while his disability interferes with the training of others, is destructive of morale to a considerable degree, and because of its slow recovery rate, prolongs the use of hospital beds that are greatly needed for other casualties.

Finally it is well known that the individual who is mentally ill tends to remain a liability after his discharge from the service. As yet we have no satisfactory methods of treatment whereby the psychiatric casualty may be returned to arduous duty without the greatest likelihood that his illness will recur; he is therefore generally looked upon as an irreparable liability, an attitude unfortunate for physician, patient, and all others concerned.

The answer to this problem would seem to be the elimination of the potentially misfit from the induction line. Although this is easily said and has been emphasized by numerous writers, the importance of the problem is not so well recognized in lay and civilian groups as in medical or military centers. As a war progresses greater numbers of men are called to service, and at the same time men are reclassified and many previously rejected may be called to

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duty as induction standards are lowered. It then becomes necessary to learn more efficient methods of eliminating the potential psychiatric casualty, and to make clear to the public the need for such elimination.

There are few objective tests that may be applied to determine the stability of a personality, and selection must be made largely on the basis of the examiner's rather subjective impression of the candidate for military service, usually the result of an interview lasting only a very few minutes. The examiner's difficulties are further complicated by the fact that the inductee may very well wish to conceal evidence of past social maladjustments or of mental illness, because of feelings of shame. Such selection could be facilitated greatly if social service data were available on the inducted men (7). However even with adequate social studies there would still be considerable divergence of opinion concerning which factors or combination of factors should be considered of sufficient significance to justify rejection from military service.

In reviewing the histories of men who have suffered mental breakdowns while on duty one is impressed by the frequency of various evidences of past inability to adjust socially and of emotional instability and immaturity. Such men could be rejected by examining boards if more adequate histories were available and more careful studies made. An objection commonly raised is that we do not have an adequate control group as we do not know how many men making a satisfactory military adjustment have in their backgrounds many of the same undesirable traits. An interesting study considering this point has been made recently of Army patients (4).

The Navy in the past has followed the policy of surveying men disabled at any time by nervous ailments, and that policy is still pursued, with the exception of the efforts that are being made to rehabilitate for military duty men who have suffered temporarily and minor nervous disabilities as the result of prolonged military operations. All cases of psychoses were surveyed from the service, such casualties eventually being sent to the U. S. Public Health Service Hospital at Fort Worth, Texas, or to St. Elizabeth's Hospital, Washington, D. C.

During the 10 months from 1 January to 1 November 1943, 1,022 service cases were admitted to St. Elizabeth's Hospital, the majority having been diagnosed as psychotic. All of these men had been treated previously at one or more Navy hospitals. These 1,022 patients were analyzed to determine the length of active duty each man had before his first admission to the sick list with the illness that caused his eventual transfer to St. Elizabeths. The results are shown in table 9.

Of this group 53.3 percent broke down during the first

TABLE 9.—1,022 patients (Navy, Marine, Coast Guard, few Army) admitted at St. Elizabeth's Hospital 1 January, 1943 to 1 November, 1943

Number of cases	Percent	Time of active service before first admission to sick list because of present disability
150	14.6	Less than 15 days
223	21.8	More than 15 days, but less than 3 months
173	16.9	From 3 to 6 months
215	21.1	" 6 " 12 "
138	13.5	" 1 " 2 years
123	12.1	Over 2 years
1,022	100.0	

6 months of military service, while 74.4 percent were hospitalized within the first year.

It was decided to study in some detail the group having less than 15 days of active duty, as it was believed that in this brief period of service, the most important factors operative in causing the individual's illness are the essential weaknesses of his own personality structure, revealed by exposure to the aggressive life of a training camp. Within the 15-day period any unusual traumatic factors (such as great fatigue) can scarcely be operative, except the influence of homesickness and the difficulties incident to a necessarily rapid adjustment to military life. It would seem that men breaking down within such a short period of time must have had well established personality defects, which, had they been known, would have led to their rejection by the induction board.

In order that the group might be as nearly homogeneous as possible, only noncommissioned white males were chosen. This left for study 100 white noncommissioned men having had less than 16 days of active duty prior to their admission to the sick list and admitted to St. Elizabeth's Hospital over a 10-month period. As a control group, 100 hospital corpsmen were studied. These men had been in the Navy varying lengths of time (average 12½ months), but all had successfully completed their training, and made a satisfactory service adjustment. Study of the patients was made by means of the usual rather extensive psychiatric history, supplemented by data obtained by social workers. A condensation of this form was used in studying the control group; however no social service investigation was made of the controls. The purpose of the questioning was carefully explained to the control group; they were not individually interviewed, and their names were not attached to the questions.

An attempt was made to include only those items which might readily be determined by social workers or by a physician in a hasty interview. The following outline includes certain elements which are of interest in comparing

the two groups under discussion, but would not necessarily be included in a questionnaire prepared for inductees. The points considered are listed below under separate headings.

Hospitalization.—Of the 100 men under study, 5 displayed such abnormal actions that they were placed under observation while on their way to training camp, 11 were taken from the recruit line at the camp, and 84 were detected during the following few days.

These men were admitted to local hospitals at the various training centers, and then sent to other naval facilities, eventually arriving at St. Elizabeth's Hospital for final disposition. (The serviceman is eligible for care at this hospital as long as he may need it, even after his discharge from the service, although he may be transferred to a Veterans' hospital should he so desire). The average total length of time spent in naval hospitals before being admitted here was 28 days. At this writing 81 of the 100 patients had been discharged, their average length of stay in this hospital being 95 days. This group therefore had a total hospitalization period of about 4 months (average 123 days) before being returned to civil life. The greater number of servicemen now passing through this hospital conform rather closely to these figures. The condition on discharge of these 81 men is shown in table 10.

TABLE 10.—Condition on discharge from St. Elizabeth's Hospital

	No. of cases	Percent
Recovered.....	18	22
Social recovery.....	27	33
Improved.....	32	40
Unimproved.....	4	5
	81	100

Of this total 76 or 93 percent were discharged within 4 months, the remaining 5 being discharged after periods of from 5 to 10 months. Treatment consisted of that which is usually available in large institutions—hydrotherapy, occupational therapy, superficial psychotherapy, and electric shock (used in 9 cases of this series). Extensive psychotherapy is not possible because of the heavy case load and the relatively small number of physicians available.

Of the 19 cases not discharged at this writing 11 had been hospitalized at St. Elizabeth's less than 6 months, while 8 had been there from 6 to 11 months and were showing only very slow improvement. It is anticipated that within the next 6 months the greater number of these 19 patients will be discharged.

The economic aspect of this problem cannot be ignored. There is first the cost of hospital care for each of the 28

days prior to arrival here; to this must be added the pay received by each patient. Yet this is insignificant when we consider the fact that each of these men by virtue of even a few days' service is eligible for lifetime care in a Veterans' hospital and may well become a claimant on the state under future bonus plans. In addition such men are completely nonproductive during their hospitalization; whereas if they had remained in civilian life they might have been able to avoid an actual breakdown and have been of value to their respective communities.

Type of illness.—As these men moved from one hospital to another their appearance from a psychiatric point of view often underwent considerable change. In the majority of cases the noteworthy characteristics of the illnesses were the sudden, violent onset of symptoms, the rather rapid subsidence without specific treatment soon after hospitalization, and the apparent significance of situational factors. These have been noted previously by Duval and Hoffman (8). The prognosis, even without specific therapy, is good, hospitalization itself playing an important role, as many situational elements are thus eliminated and the patient's feelings of insecurity somewhat relieved.

Table 11 shows the final diagnoses made in the 100 cases under consideration. These diagnoses were applied after approximately 2 months of hospital observation.

TABLE 11.—Final diagnoses of cases

Diagnosis	Number of cases
I. Manic depressive psychosis:	
A. Manic phase	5
B. Depressed phase	3
Total	8
II. Dementia praecox (schizophrenia):	
A. Catatonic type	47
B. Paranoid type	9
C. Hebephrenic type	4
D. Mixed type	4
E. Undetermined type	15
Total	79
III. Undiagnosed psychosis	6
IV. Involutional melancholia	1
V. Psychosis, alcoholic	2
VI. Psychosis with mental deficiency.....	3
VII. Psychoneurosis (hysteria)	1
	13

The large majority of schizophrenic reaction types is the most striking feature noted. It will be interesting to

compare this percentage at some later date with psychotic casualties evacuated from combat areas.

Of the 100 patients, 6 had made serious suicidal attempts, an illustration of the rapid breakdown of the defenses of an already unstable individual when there was a sudden increase in his feelings of insecurity by virtue of his rapid transfer to a military environment. Faced by an apparently intolerable situation the man seemed to rush to the very definite protection afforded by his illness. In these men the psychosis seemed to be a more functional and obviously protective device than is usually seen in peacetime in civilian life.

In none of these men was there any question of malinger, but each buried himself in a psychotic maelstrom, being quite incapable of effecting an adjustment to the actualities of the situation. Improvement in most instances followed rather quickly upon removal from the traumatic environment, and the assurance that further military duty would not be required.

Age.—An outstanding feature of both groups was their youth. The ages of the patients ranged from 17 to 49 years. Of this number, 54 were under 20 years, while 90 were less than 30 years of age, the remaining 10 ranging from 31 to 49 years. With one exception (the man aged 49) all were subject to draft, and the great majority were inducted.

Twenty-two of the patients had shown a marked fear or resentment of induction. Forty-four definitely stated that they had no desire to enter the service. Twenty-nine had been eager to enter for patriotic reasons. In one instance the man had been retarded and hallucinated, but was urged to go into the service by his parents who believed that camp life might effect a cure. The remaining four joined "to get away from it all."

The control group ranged from 18 to 36 years, with 26 being less than 20 years, while 85 were less than 30 years. Of the controls, 40 entered the service for patriotic reasons, 55 were inducted, 3 wished to make the Navy a career, and 2 joined to escape an unhappy marital life. All were subject to induction.

Family relationship.—Some difference was noted in the two groups when an attempt was made to evaluate the degree of happiness found in the home life. In the control group 90 individuals considered their home life happy and looked back with pleasure upon their formative years. Ten stated that the home had been disturbed by conflict between parents. In 6 instances the father had died when the child was less than 10 years of age, and in 5 the mother had died during this period, but in only one instance had both parents died before the child had reached maturity. None of these children were cared for in institutions or foster homes, but were supported by the survi-

ving parent or by relatives. Divorce of the parents was noted in only two instances. Sixteen of these men said that they were very closely attached to the mother, while three were devoted to the father.

In the patient group the family life was disrupted by divorce of the parents in 9 instances, this occurring when the patient was under 10 years of age in 6 instances, the remaining 3 taking place when the patient was between the ages of 10 and 20 years. In 21 cases the family was broken by the death of the father, and in 9 by the mother's death, all of these deaths occurring before the patient was 15 years of age. Two of the children were cared for in orphan homes, and 9 were cared for by relatives. Only 49 of the homes were listed as happy, while 11 were marred by parental discord, 11 by alcoholism of the father, 1 by an alcoholic mother, and 3 by the criminality of one or both parents. In 3 cases the parents were listed as being cruel to their children. Twenty-eight of the patients manifested an extremely close attachment to the mother, and two showed a similar attachment to the father.

Although these findings are not conclusive, it is emphasized again that a stable home, which offers the child security and aids him in developing self-confidence, plays an important role in forming an intact personality pattern. For this reason information concerning the home environment of the prospective servicemen should be available to the examining physicians.

Mental illness in the family.—In the particular groups under consideration physical illness in the family as a factor in disrupting the home seemed to be of minor importance. Table 12 summarizes the findings regarding mental illness in the family.

Fourteen of the patients' families reported two or more members mentally ill in addition to the patient. Fifty percent of the families reported no history of mental illness. The conclusion to be drawn of course is not that a man should be eliminated from service because of a familial history of mental illness, but that when such a history is presented the case should be investigated more thoroughly to determine if other characteristics of an unstable personality are present.

Infantile traits.—The persistence of certain infantile traits into adolescence and adult life is looked upon as evidence of inadequate maturation and is suggestive of personality instability. Certain of these traits may assume greater importance in military than in civil life, as they may be the cause of unfavorable comment by others, and thus increase the individual's feelings of insecurity. Enuresis for example cannot be tolerated aboard ship because of hygienic reasons, in addition to the fact that the fault cannot be concealed and will be subject to much public comment. Table 13 outlines a number of these traits, list-

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TABLE 12.—*Mental illness in the family*

Relative mentally ill	Emotional instability not hospitalized		Definite mental illness not hospitalized		Mental illness requiring hospital care	
	Patients	Controls	Patients	Controls	Patients	Controls
Father.....	3	1	2 (epileptics)	0	7	1
Mother.....	8	2	2	1	4	2
Both.....	1	0	0	0	0	0
Siblings.....	5	0	11	0	8	2
Uncle.....	0	2	0	2	0	0
Aunt.....	0	1	0	2	6	0
Other.....	0	2	8	0	6	3
Total.....	17	8	23	5	31	8

ing only those that were persistent into adolescence or later.

Of the patient group, 13 were enuretic beyond the age of 11 years, whereas in the control group none displayed this trait into the twelfth year. Fifty-seven of the patients reported some of the characteristics noted in table 13, whereas 72 of the controls had none of them.

TABLE 13.—*Persistent infantile traits*

Item	Patients	Controls
Enuresis	24	3
Temper tantrums	4	2
Thumb sucking	20	0
Stuttering	6	1
Night terrors	4	0
Nail biting	15	8
Sleep walking	4	0
Sleep talking	3	0
Timidity	3	2
Considered "sickly" by family.....	3	0
"Nervousness"	10	0
Headache (no history of trauma).....	2	8
Claustrophobia	0	1
Fear of heights.....	0	3
Fear of storms.....	1	0
Fear of dark.....	2	2
Fear of water.....	1	5
Two or more of these traits present.....	25	10
Three or more traits present.....	11	3

The presence of a single trait in an individual may be of questionable significance, but a combination of several would seem of sufficient importance to justify further investigation. Again it should be emphasized that few traits (with the exception of persistent enuresis) are in themselves of sufficient importance to justify rejection, but that the presence of one or more relatively minor defects may guide the investigation so that unstable persons may be identified before they become actual casualties.

It is interesting to note that five of the controls manifested a fear of water, three a fear of heights, and one fear of crowded places—definitely undesirable traits in men who may be called upon to serve at a variety of stations during their naval careers. These characteristics noted in the controls are of course more typical of the psychoneurotic, and their absence in the psychotic patients is not altogether surprising.

Previous mental illness.—It is contended that a man should be rejected by the military service if he has previously suffered from a mental disorder. The man who has made a satisfactory adjustment to civil life after recovery from a mental disease may break again under the strains incident to military existence.

Of the control group, 94 reported negative histories. Five members of this group had at some time in their lives had their work or schooling disrupted for brief periods because of emotional disturbances not requiring hospital care. One man had been hospitalized for a few weeks because of mental illness.

Of the patient group, 7 had been previously hospitalized in mental institutions, and 10 had been cared for at home during periods of mental illness. Of those treated at home, 4 had suffered from recurrent episodes of the disorder. In addition 4 had been under psychiatric care at intervals before their entry into the service. It is interesting to note that 13 of these men displayed obvious evidence of mental disorder for some months prior to induction, 6 being actively hallucinated, 1 having made a suicidal attempt, and 1 being hampered by a profound obsessive-compulsive pattern. Only 69 of the patients gave negative histories.

Although a few individuals who have undergone a mental sickness may be able to perform adequately in military life, it is believed that the chances of recurrence are so great that all with such a history should be rejected.

Education.—A marked difference was noted between

the two groups in regard to education, although the age differences were relatively insignificant. Twenty-two of the patients had only an eighth-grade training or less, and 38 had less than a high school education; 26 were high school graduates. Of the controls 40 were graduates from high school and 35 had some college training.

Participation in social activities.—An attempt was made to determine the individual's participation in the social activities of his community, with due regard to the limitations found in certain sparsely populated areas. Of the patients, 3 were considered to be above the average for taking part in social enterprises, while 64 were said to be average. Thirty-three were noted to be very inactive socially. Of the controls, 89 were active members of community groups.

Criminal record.—Of the patients, nine had been arrested for multiple minor offenses and one had served a term in an Army prison for being AWOL. In the control group six had been arrested for traffic violations.

Personality.—Seventy-eight of the controls considered themselves to be "extroverts," while 22 were listed as "introverts." Of the patients, 36 were noted as quiet and seclusive while 30 more were classed as "introverts" making an outwardly adequate social adjustment. One of the patients had been subject to marked mood swings for a number of years. Thirty-three of the patients were considered to be extrovert in type.

Employment record.—In the control group, 85 were listed as good or adequate in regard to income, performance of work, and ability to cooperate satisfactorily with superiors. Six were listed as fair or indifferent in these qualities, while 8 had done no regular work because of schooling and 1 had shifted from one job to another with little apparent reason for change.

Twenty-one of the patients had held no regular jobs because of school, and 13 had never worked because of emotional or intellectual defects, making them unemployable. Twenty-one had never held one job for any length of time, but had shifted from one to another, usually changing because of restlessness or minor dissatisfaction. Six of the men were noted by employers as undesirable for various reasons. Forty had good work records.

Alcohol or drugs.—There were no instances of drug addiction in this group. In the control group, 20 were listed as abstainers from alcohol, 79 as moderate or "social" drinkers, and 1 said that he regularly drank to excess. Of the patients, 85 drank moderately or very infrequently, whereas 15 were listed as heavy drinkers.

Emancipation from home.—In making this study the frequency with which severe nostalgia appeared was noteworthy. Flicker and Weiss (9) have discussed this problem. In 33 patients homesickness was a prominent feature.

In 77 cases the entry into the military service was the first experience away from home.

Of the control group, 35 had never lived away from home for more than a day prior to their entering the Navy, and 65 had been away from home for periods of at least several months. Eighteen of the controls stated that they had been very homesick during the early training camp period, but had been able to adjust satisfactorily.

Combination of factors.—As noted previously it is rare that a man will be rejected because of a single unfavorable factor in his history. The determination of one or two such factors should lead to a search for others and a more careful evaluation of the individual. The cases presented here were reviewed with this in mind, the following items being considered: (1) Mental illness in family; (2) developmental abnormalities; (3) school history; (4) criminal record; (5) history of previous mental illness in patient; (6) personality of patient; and (7) employment record.

Seventy-one of the patients listed unfavorable items in two or more of the categories noted above. Twenty-three had three or more unfavorable listings, 19 four or more, 11 five or more, and 5 were noted in six instances. Six of the controls listed unfavorable items in three of the categories, while 2 were listed in two places.

COMMENT

In the course of this small study certain factors were noted which, it is believed, would be of value in gaging a man's fitness for military service. During the investigation rather complete histories were taken, but all elements are not reported here as they seemed of comparatively little significance in these groups and were of questionable value for inclusion in a social record to be used for induction centers. Such items were parentage, siblings (number and relation to patient), religion, type of community from which the man came (urban, rural), etc. Although some of this data could be obtained from the individual examined, more satisfactory results would be anticipated if it were received from objective sources, such as investigations by social workers.

The following points should, we believe, be included in any social study; (1) Character of the family relationship; (2) history of mental illness in the family; (3) persistent infantile traits; (4) previous mental illness; (5) educational history; (6) social life; (7) criminal record; (8) sex; (9) employment record; (10) use of alcohol or drugs; and (11) degree of emancipation from home. (The boy who has never learned to make his own decisions, who is still emotionally dependent on his home and parents, may make a satisfactory military adjustment, but he will suffer in so doing, and his chances of failure are

greater than those of the boy who has achieved some degree of freedom from familial bonds.)

Prior to the war careful investigations were made of each man enlisted in the Navy. It is believed that the investment in time and money would be well justified should brief social service studies be carried out in each community on men subject to induction, the results being made available as confidential information to the psychiatric member of the examining board. The most satisfactory approach to this problem certainly lies in prevention. Once the illness has manifested itself the road to recovery is long and uncertain—costly to the service, the patient, his family, and his country.

SUMMARY

1. One hundred white male (Navy and Marine) psychotic (including one neurotic) patients at St. Elizabeth's Hospital, Washington, D. C., were studied in an effort to determine factors which, had they been known earlier, might have served as grounds for rejection by the induction centers.

2. All of these one hundred men were hospitalized because of a mental illness before they had served 15 days on active military duty.

3. A control group of one hundred hospital corpsmen was studied, the average length of service of this group being 12½ months.

4. The two groups were compared in regard to age, parentage, siblings, family life, illness in the family, early development, previous mental illness, education, social

activity, criminal record, personality, employment record, use of alcohol and drugs, and degree of emancipation from the home.

5. The patient group displayed a greater number of so-called "psychiatric determinants" than did the controls. The desirability of having such data available at the induction center is obvious.

6. The need for social service histories as an aid to psychiatric selection of inductees is stressed.

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CHAPTER 8

NEUROPSYCHIATRIC CLINIC AT A NAVAL CONSTRUCTION TRAINING CENTER*

With the origin of the "Seabees" there arose a rather novel situation in Navy recruiting. For the first time the Navy began organizing a large number of highly skilled tradesmen for a definitely specialized type of activity.

Due to the select nature of the group and because of its higher mean chronological age we felt that the distribution and nature of the neuropsychiatric problems found might differ from those usually found in a naval receiving or training station. It is for this reason that we are presenting our findings during the first 6 months of the clinic's operation.

The neuropsychiatric clinic was formed at Camp Allen in May 1942. Its personnel consisted of a neuropsychiatrist, a psychologist, and a yeoman. Because of the extremely large number of recruits passing through the station and our limited personnel, it was found impossible to interview each man as he came through the receiving line. Consequently it was decided to depend on cases referred to the clinic during the training period of six to eight weeks allotted to each man. All departments involved in handling the men during their stay in Camp Allen or Camp Bradford were aware of the clinic's existence and its desire to see all men who were experiencing undue difficulty in falling into the activities of their group, as well as men who were constant visitors to battalion sickbays, were bed wetters, etc. In addition, problems were referred to the clinic by the battalion medical officers. The commanding officer likewise directed to this department all suspicious cases appearing at mast.

It is quite probable that many cases were missed which might have been picked up if each recruit had been interviewed by this department. However, the policy of having

every case causing suspicion in the minds of the regimental training and medical officers referred to us, brought forth many that assuredly would have been missed in a short interview on the examining line.

During the interval with which we are dealing there were 668 patients referred to the clinic for study. This number does not include those examined for intellectual suitability for elective surgery, and does not include revisits of individuals for rechecks or minor psychotherapy.

The disposition of these 668 cases is given in table 14:

TABLE 14.—Disposition of cases seen by N-P department

Cases seen but not discharged from the service.....	341
Cases seen and discharged from the service.....	255
Cases transferred to hospital for discharge.....	72
Total	668

The prime function of the NP clinic is to discharge from the naval service those individuals who are unfit because of a neuropsychiatric disorder. Of the 668 subjects examined by the NP clinic, 255 were discharged from the naval service. Table 15 shows the various diagnoses attached to the discharges of the subjects.

Sixty-eight cases of enuresis were sent home. This is 26.6 percent of all the cases discharged. In many cases we had the mattress and the bedding examined to verify the patient's story. No case was discharged on history alone, the patient had to wet his bed at least once while in camp. It was in this group, however, that we lost some excellent naval material. These men were well educated, expertly trained, and extremely anxious to do their duty and remain in the Navy. Many of these subjects consciously withheld the information of their enuresis from the recruiting officer due to their desire to get into the Navy. Many others just "slipped by." We used as much care as possible in evaluating the enuretic history of these subjects. It was felt, however, that if a subject would deliberately wet his

* By Stanley M. Dillenberg, Lieutenant Commander (MC) U.S.N.R., and Bernard Locke, Lieutenant H-V(S) U.S.N.R. Received for publication November 25, 1942.

bed to evade naval service, he was not the type of individual we wanted. Fourteen of the cases of enuresis occurred in the one Negro battalion that was formed. This made the incidence of enuresis among the Negroes some 40 times greater than among the whites.

Thirty-six men were eliminated for mental deficiency. This is 14.1 percent of all the cases discharged. Twelve of the 36 men were Negroes. Since the proportion of the Negroes to the white men who came through during this interval was roughly 1 to 40, the incidence of mental deficiency in the Negro group was almost 20 times as great as in the whites. These mental defectives were eliminated after a careful clinical evaluation of their performances on acceptable measures of intelligence such as the Bellevue adult scale of intelligence or the Terman-Merrill revision of the Binet, and an evaluation of their social and economic backgrounds. A mental age of $9\frac{1}{2}$ to 10 years for the Negroes and $10\frac{1}{2}$ to 11 years for the whites was usually considered as the lowest acceptable level for retention in the service.

TABLE 15.—*List of reasons for discharge*

Acromegalia	1
Alcoholism, chronic	27
Arteriosclerosis, cerebral	2
Constitutional psychopathic states:	
Emotional instability	7
Inadequate personality	11
Paranoid personality	1
Sexual psychopathy	2
Dementia paralytica	1
Drug addiction	1
Encephalitis	2
Enuresis	68
Epilepsy:	
Grand mal	31
Petit mal	5
Glioma	1
Hypochondriasis	3
Mental deficiency	36
Migraine	10
Narcolepsy	1
Neuritis:	
Brachial	1
Sciatic	1
Post concussion syndrome	2
Posttraumatic encephalopathy	2
Psychoneurosis:	
Anxiety neurosis	6
Compulsion neurosis	1
Hysteria	17
Neurasthenia	5
Somnambulism	10
Total	255

Epilepsy was the next most frequent cause for rejection. These cases were most frequently picked up when they had

a seizure while in camp which was reported by an eye witness. Practically all epileptic subjects did everything in their power to conceal their history of seizures and would not volunteer the information of their own accord. It is very possible that some epileptics have gone out with battalions, as the men are only kept in this camp from 6 to 8 weeks and it is not infrequent for longer periods than that to elapse between seizures. This, unfortunately, cannot be avoided. Thirty-six men were eliminated for epilepsy—31 for grand mal and 5 for petit mal. This is 12.1 percent of the total number of men surveyed. Frequently eye witnesses of the seizures were called to give descriptions. Red Cross investigation was also done on a number of cases to determine authenticity of statements.

Due to the older age group of men examined a much higher incidence of chronic alcoholism was found than is seen in most training stations. Twenty-seven men were sent home for this reason. This is 10.6 percent of all cases discharged. Discretion was used in eliminating chronic alcoholics. If a man was a steady, constant imbibitor but always worked hard, never lost a job because of drinking, had never been in conflict with the authorities, and apparently would be valuable to the Navy, we would be inclined to keep him on probation. Our tendency was toward leniency. On the other hand, if the subject was a heavy drinker, was arrested frequently because of ethylism, tried several cures without success, gave up or lost jobs because of drinking, or went A. O. L. or A. W. O. L. on several occasions, he was discharged from the Navy. Or if he was inadequate, never held a good job, he was eliminated. This also was the procedure if the stigmata of chronic alcoholism were marked, such as tremors, flushed facies, memory defects, peripheral neuritis, etc. Acute alcoholics were kept in the ward for a few days, given salts, thiamine, and sedatives. Only after this was an estimate made of the subject's ability to withstand naval routine.

Twenty-nine subjects were discharged from the Navy with the diagnosis of psychoneurosis of one type or another, as indicated in table 15. This is 11.3 percent of the group surveyed. It was in this group that the greatest problems arose. Many men coming from civilian life had considerable difficulty adjusting themselves to Navy regime. Numerous psychoneurotic symptoms would appear which would be transitory and purely situational. These would disappear after the men had an opportunity to adjust themselves to their new way of life. It was the practice of the NP board never to survey a man with the diagnosis of psychoneurosis until all organic possibilities were ruled out and the subject was followed at least two or three weeks while attempting to do full Navy routine. Many men

were kept in the Navy with mild psychoneurotic symptoms and they undoubtedly will make excellent sailors. The history in these cases is a very important factor and was gone into with great care. The type of work done in civilian life, the amount of work missed because of their psychoneurosis, the frequency with which they had to visit their physician were important factors in determining whether or not a case should be surveyed. It will be noted that more than half the cases were discharged because of hysteria. In these cases all necessary consultations were had and reported as normal. All relevant laboratory work was done and reported as normal. Treatment in these cases consisted of psychotherapy, suggestion, physiotherapy, etc., and then if their hysterical complaints did not clear up they were considered for discharge.

The constitutional psychopathic states comprised 21 cases, or 8.2 percent, of the cases eliminated. This group contained the more obvious misfits. They just could not fit themselves into the routine of the Navy. They would not take orders, would be A. O. L. or A. W. O. L. without apparent cause, they would have temper tantrums, emotional instability, and numerous trips to the brig and before the captain at mast. Here again the history was important. These individuals were found to be the same misfits in civilian life as in the Navy. They were unable to keep a job, were vagrant, were arrested frequently, never made much money, and on the whole were totally inadequate from the start.

Ten subjects were sent home because of somnambulism (3.9 percent). We are compelled to eliminate somnambulists for obvious reasons, and several excellent men were lost to the Navy because of this condition. Here again the men must have been seen walking in their sleep by someone in camp. No case was discharged on the history alone.

Migraine caused the dismissal of ten men from the Navy. The headaches had to be incapacitating and associated with gastro-intestinal or visual symptoms or both. In several cases a therapeutic test was given with gynergen with spectacular results. In every case that this substance was tried the headache was definitely relieved. The gynergen was given subcutaneously and in most cases caused a mild gastro-intestinal upset and a feeling of light-headedness. Despite these untoward symptoms the subjects were most grateful for the relief given.

The two chief reasons for sending patients to the hospital for discharge were that they were too ill to get home by themselves or that they had had previous service in the Navy or Marine Corps. A few cases were sent to the hospital for dismissal when the diagnosis was obscure, and further observation and laboratory tests were indicated. Our follow-up consisted of calling the hospital weekly. In

almost all cases the discharge diagnosis was obtained (table 16).

TABLE 16.—*Cases sent to hospital for discharge*

Alcoholism, chronic	4
Amnesia	1
Congenital deformity	2
Constitutional psychopathic states:	
Emotional instability	1
Inadequate personality	2
Sexual psychopathy	1
Dementia paralytica	4
Dementia praecox	14
Disseminated sclerosis	2
Epilepsy: Grand mal.....	4
Fibroma, multiple	1
Intraspinal injury	1
Manic depressive psychosis.....	8
Migraine	1
Neuritis:	
Musculospiral	1
Sciatic	2
Paranoid state	1
Post concussion syndrome.....	1
Psychoneurosis:	
Anxiety neurosis	4
Compulsion neurosis	2
Reactive depression	2
Spinal-cord tumor	1
Spinal-cord disease	1
Unclassified	11
Total	72

Twenty-six of the seventy-two patients referred to the hospital were sent because of psychosis. Fourteen had schizophrenia, eight manic depressive psychosis, and four dementia paralytica. This comprises 36.1 percent of all the cases sent to the hospital for discharge. For obvious reasons all the psychoses were so transferred.

Eleven cases were sent to the hospital for discharge because of diseases which were unclassified in this clinic. This was 16.6 percent of the total number of patients sent to the hospital for elimination. This group consisted of some psychoses, vague neurological disturbances, and severe psychoneuroses.

Four cases of chronic alcoholism were sent to the hospital. They were sent because of previous naval service or because they were too disturbing to keep in our ward, where facilities to handle such cases were entirely inadequate.

Three hundred and forty-nine cases were seen by the NP board but were returned to duty. Table 17 gives the distribution of these cases. Eighty-seven of this group were not neuropsychiatric problems and were sent to other departments for diagnosis and disposal. Sixty-four were considered to be mild psychoneuroses and were returned

as fit for duty. Most of these cases were seen only once and apparently adjusted themselves to naval life shortly after we saw them. Many were followed for several weeks, and with mild psychotherapy and assurance were able to go back to their work and adjust satisfactorily. Fifty-three cases were returned to duty with "no disease." Headache was a very frequent complaint (23 cases). All organic causes for these headaches were ruled out either by an eye, ear, nose, and throat consultation, or x-ray, refraction, etc. The history and type of headaches were not suggestive of migraine nor were the headaches incapacitating. This group was classified as cephalalgia and in most instances relief was obtained by mild analgesics. Twenty-one cases of peripheral neuritis were sent back to duty as the disability was not incapacitating. Most cases were relieved by high-vitamin therapy and psysiotherapy. Several cases of meralgia paresthetica were included in this group and responded fairly well to treatment.

TABLE 17.—Cases seen and sent to duty

Alcoholism	15
Borderline intelligence	15
Cephalalgia	23
Dementia pugilistica (mild).....	1
Habit spasm	1
Heat prostration	4
Herpes zoster	2
Inadequate personality	11
Malingering	5
Meniere's syndrome	1
Migraine	7
Myositis	4
Nightmares	1
No disease	53
Not neuropsychiatric	87
Nostalgia	10

Old spine injury.....	2
Paranoid personality	1
Peripheral neuritis	21
Post concussion syndrome (mild).....	8
Psychoneurosis (mild)	64
Sciatica	3
Stammering	2
Total	341

SUMMARY AND CONCLUSIONS

In the first 6 months of the clinic's operation, 668 cases were referred for examination. Of this number 341 were returned to duty or referred to other departments. Two hundred fifty-five were given special order discharges and 72 were transferred to the naval hospital for elimination.

Almost 50 percent of the cases seen (327) were discharged either directly or by transfer to the hospital. Since we heard that most recruit induction stations were discharging 4 to 6 percent of the men coming through for neuropsychiatric disturbances, our average of approximately 0.75 percent appears quite low. We feel that this is due to the fact that, for the most part, our recruits were more mature, they were hand-picked, and the majority highly specialized artisans rather than a pure random sampling. Undoubtedly some undesirables slipped by, but we feel that if they were not discovered during the 2-months' training period, which was of a severe type, it is improbable that these individuals presented any serious problems in the field.

While this method of weeding out undesirables was applicable with the type of group with which we had to deal, we do not advocate the discontinuance of the usual neuropsychiatric interview on the induction line, as we feel that it has a most important function to perform.

CHAPTER 9

FUNCTIONS OF A PSYCHIATRIST IN A NAVY YARD¹

There was a steadily increasing number of requests at this station in World War II for psychiatric consultations for the Navy and Marine Corps personnel, and the need for psychiatry among the more than 75,000 civilian workers also became increasingly obvious, both in the selection of those men during pre-employment physical examinations and in the adjustment of their problems after employment. The strain of their work resulted in a large number of neurotic manifestations as well as in some malingering. Close liaison between the medical officer in charge and the psychiatrist was vital.

The influx of discharged veterans seeking employment made the work of the psychiatrist increasingly important. Because of the high percentage of discharges for neuropsychiatric reasons, these men became the special problem of the psychiatrist. Careful consideration of their individual problems was essential.

The types of cases seen are suggested by listing the activities for a representative month:

² Total number of neuropsychiatric examinations made.....	752
Daily average	29
These were divided as follows:	
New applicants (veterans).....	238
New applicants (4F).....	129
New applicants (others).....	208
Civilian workers (rechecks).....	125
Navy, Marine Corps, and Coast Guard personnel.....	52
Total number of physical examinations for employment (including psychiatric examinations).....	3,237
(Only those whose physical condition was questionable were seen by the medical officer of the Labor Board.)	
Total number of physical examinations for recheck (including psychiatric examinations).....	1,537
All these cases reviewed by the medical officer of the Labor Board.	

Employees of the yard, regardless of veteran status, are

reexamined to determine fitness at the request of their personnel supervisors or at their own request, whenever indicated. Psychiatric examination is made whenever there is a possible psychiatric basis for a physical complaint. A special effort is made to rescreen veterans for more suitable jobs whenever legitimate reasons for doing so are found.

Psychiatric examinations are given only to those veterans applying for jobs who were discharged from the services for neuropsychiatric reasons. Selection is extremely important, both for the good of the veteran and that of the yard. The man who had a nervous breakdown after a few weeks or months of boot camp or basic Army training is unlikely to adjust to the noise and bustle and discipline of a Navy yard. However some have already demonstrated by previous satisfactory civilian employment that their unadaptability applies only to the armed services. These men can be accepted with fair assurance of satisfactory work. The veteran discharged after combat duty with war neurosis of the anxiety type may adjust to Navy yard work if assigned to work which he likes in surroundings where the noise and confusion is not too great. He is unlikely to adjust to noisy surroundings if startle reaction, irritability and anxiety still continue. Only a small percentage is considered unfit for any duty in the yard.

No veteran who is honorably discharged is rejected for employment. A job is found for him. Even those with bad conduct and undesirable discharges are usually given a job in the hope that they can be rehabilitated. Few of these give serious trouble. They are, however, subject to a preliminary investigation by the Civil Service Commission. They are unacceptable to the Commission only if convicted of desertion. Lesser offenses are penalized only by the loss of veteran's preference.

New applicants in the 4F category are given psychiatric examinations if they have been so classified for neuropsychiatric or for unknown reasons. A large percentage of these are acceptable on the practical theory that although

¹By Harold J. Harris, Lieutenant Commander (MC) U.S.N.R.

²Since the above was written there has been a further increase in psychiatric examinations made. During the month of January 1945, 818 such examinations were made.

they may be questionable or poor material for the armed services they may be satisfactory for the type of civilian work for which they have already shown adaptability. Many of these, however, fail to live up to expectations and must later be released. Rarely is the overt homosexual or definite psychopath acceptable.

Other civilian applicants receive psychiatric examinations if there is any obvious indication for it, such as history of a neuropsychiatric condition, obvious peculiarities of behavior noted during physical examination, or evidence of defective mentality. Jobs can be found for the majority of those with limited intelligence, above the level of moron, but not for the psychopaths, severe psychoneurotics or psychotics. Those recovered, or in remission following psychotic episodes, are employable under the regulations if they have had at least 6 months of satisfactory employment following discharge from the mental hospital. Those accepted are frequently subject to recurrence and must be reexamined and found unfit, temporarily or permanently.

Sixteen-year-old boys, applying as apprentices, are seen for a rapid psychiatric check-up and estimation of mental capacity, if they have failed to complete 2½ years of high school. Most of those in the limited intelligence group, with little mathematical or general knowledge, have worked out well. Those found weak in mathematics are employed in painting, shipfitting, blacksmithing or foundry work, rather than as machinists, electricians or sheet-metal workers.

Civilian workers are given psychiatric examinations (rechecks) either at the request of their superiors because of obvious behavior abnormalities, or because routine physical examination has revealed the necessity for such evaluation. They are then classified as "unfit permanently," "unfit temporarily" (pending treatment), "unfit for assigned duties" (with a view to rescreening for other work or placing them in limited duty status), or "fit."

As medical officer of the Labor Board the psychiatrist reviews the findings and recommendations after physical examination of each of the persons sent in for recheck examinations each month. The need for further evaluation from the psychiatric viewpoint is often seen.

Navy, Marine Corps and Coast Guard personnel are seen by the psychiatrist at the request of the medical officers in the sickbays of the yard, or of the medical officers or pharmacist's mates on ships tied up at the docks. Many Marines on limited duty in the yard are seen and an opportunity is afforded to recommend change of duty when

indicated, or return to hospital with a view to discharge from the service when it is obvious after adequate observation that they cannot adapt to the service. The line officers of the Marine Corps directly refer men who come to their attention, including the stragglers who turn themselves in at Navy yards. The decongestion of Marine barracks' brigs is made possible by prompt psychiatric examination of prisoners.

Evaluation of industrial injuries involving (or purporting to involve) the central nervous system is one of the major problems on which the psychiatrist is consulted. There are many head injuries, the vast majority of which are trivial or at least mild, with no intracranial complications. The train of symptoms induced in emotional individuals as well as in psychoneurotics is too well known to require discussion. Malingering is not rare. Many instances are found in which the working conditions or trauma have been precipitating factors in the appearance of the more serious neuroses or psychoses. The importance of recognizing them promptly is obvious.

USE OF CORNELL SELECTEE INDEX

Use of the Cornell Selectee Index³ as a starting point for virtually all of the psychiatric examinations has effected so much saving of time as to make possible the examination of large numbers of persons, occasionally as many as 60 in a day. Over 9,000 such forms were executed in the 12-month period ending 15 February 1945. The Index has the additional advantage of serving as a permanent record.

A notable fact is that greater truthfulness in answering such questions as "Have you ever had a fit or convulsion?" or "Have you ever had a nervous breakdown?" is found in the written answer than in the verbal one. Using the significant answers on the Index as a starting point, information which leads to accurate conclusions can be rapidly obtained. Previously denied epilepsy, for example, is frequently diagnosed by following up the questions on the Index.

The Index contains virtually all the necessary questions that the psychiatrist would ask. The examinee fills out his form while waiting for examination. The form is then quickly rated, significant answers and totals are noted and are followed up by oral questioning. The number of psychiatric examinations made in the yard each month steadily increased from 202 in April 1943 to 818 in January 1945. Even with the use of the Cornell Selectee Index this number taxed the ability of one psychiatrist. Without use of the Index much of the work would have been done less accurately or neglected.

The cover page of the Index, form C, has space for the examinee's name, age, date, occupation, grade reached in

³Information concerning the Index and the forms themselves are obtainable from the authors, Weider, A., Mittlemann, B., Wechsler, D., and Wolff, H. G., New York Hospital, 525 East 68th St., New York, N. Y.

school, address, month and year of birth, and very simple questions such as: "What is the capital of the U. S. A.?" and "Put a line under the countries fighting on *our* side: RUSSIA, JAPAN, ENGLAND, GERMANY."

The first inside page lists 44 jobs or occupations with directions to encircle the "L" or "D" after those which the examinee might like or dislike. A stencil is furnished the examiner quickly to evaluate the job preferences, which are then noted in the scoring box. The distribution and number of likes and dislikes gives a ready idea of the feminine trend and of the degree of withdrawal of the subject. Those showing 9 or more significant answers or 3 or fewer likes are given special psychiatric attention.

The second inside page has 52 questions to be answered by encircling the "G" "P" or "?" to indicate "good," "poor" or "questionable" in an attempt to evaluate the examinee's self-esteem. These are recorded as the number of significant "poors" and the total number of "questionables" in the scoring box by means of another stencil. Those showing 12 or more significant "poors" or 30 or more "questionable" answers receive psychiatric appraisal.

The last page of the form is devoted to symptoms indicating psychogenic or psychosomatic complaints, as indicated by significant answers which are quickly scored as before. Persons showing a score of 15 or more receive special psychiatric appraisal. The stencil is marked to pick up various "stop-questions," affirmative answer to any one of which would also call for special psychiatric appraisal.

A simplified form (N) may be used instead of form C. It consists of a copy of the last page of Form C. It gives less information but has been found useful, especially for evaluation of boys such as the 16-year-old apprentices. This list of questions is adequate for estimation of the

psychoneuroses but throws less light on their cause than does use of the more complete form. The simplified form scores the total number of psychoneurotic determinants and the stop questions only.

The Index affords a qualitative means of obtaining necessary psychiatric information, regardless of use of the stencils. Page 3 of form C (or form N) is in essence a standardized psychiatric interview which is self-administered and gives a quick, reliable screening method for detection of neuropsychiatric and psychosomatic disorders.

SUMMARY

The functions of a psychiatrist in the Navy yard are manifold. Psychiatric examinations are done for a steadily increasing percentage of new applicants for employment. Those most likely to be inept are immediately detected and either rejected or referred to other agencies.

Similar examinations are done as a part of re-examination (rechecks) of a steadily increasing percentage of those requiring re-evaluation after employment. Personnel of the Navy, Marine Corps and Coast Guard are afforded prompt psychiatric examination on the station. An overall picture of all physical examinations for new employees is obtained. All re-examinations of civilian employees are reviewed, from both a physical and a psychiatric viewpoint.

This system results in better selection of applicants for the various jobs and of jobs for the physically or psychiatrically handicapped applicants. Increased efficiency and saving of time is effected in examination and disposition of Navy, Marine Corps and Coast Guard personnel.

The rehabilitation program of the Government is facilitated by classification of psychiatric cases and cooperation in job-selection between the psychiatrist, the civilian personnel of the Labor Board and the Civil Service Commission.

SECTION II

EXAMINING PROCEDURES

CHAPTER 10

A RAPID DETERMINATION OF INTELLECTUAL ADEQUACY FOR THE NAVAL SERVICE¹

The inductees examined by the psychologists and psychiatrists at this station present a peculiar problem when a determination of their mental ability is desired. The reasons for this difficulty are: 1. Many of the recruits possess a language handicap which makes it difficult for them to express themselves in English even though they are able to understand the examiner. 2. Inasmuch as illiteracy per se is not considered a cause for rejection, some method had to be found for determining the intellectual ability of illiterate recruits without resorting to reading. 3. Many of the recruits are unable to write more than numbers or their own names. 4. The practical problem of time has to be considered, because the recruits have to be examined as part of a continuous physical examination.

For purposes of selection, all that is required is a quick estimate of intelligence which will classify a man as either mentally defective or not mentally defective. Only the men whose intellectual level seems questionable are tested. If found adequate, they are sent on to duty without further question. If, however, they are found lacking they are given further tests.²

Some test was sought, therefore, which could be administered and scored quickly, which required no reading on the part of the inductees and which required them to write nothing more than numbers or their names. Many tests were considered but were found unadaptable to our requirements. The device to be described here, entitled Differentiation Test, was constructed especially to fit the situation.

The subject is given an answer sheet on which he is to write his name, age, and number of school grades completed. Then there is read aloud a list of 14 questions, to

which the answers in every case but one are numbers. The administration of the test requires approximately 5 minutes. The following is a copy of the test together with the time limits permitted for each question:

DIFFERENTIATION TEST	
Question	Time-seconds
1. How many eggs are in a dozen?.....	5
2. How many minutes are in an hour?.....	5
3. How many quarts are in a gallon?.....	5
4. How many States are in the United States?.....	5
5. How many feet are in a yard?.....	5
6. How many sides does a square have?.....	10
7. If three lemons cost 5 cents, how many lemons can you buy for a quarter? (Repeat).....	30
8. If you bought 9 cents' worth of candy and gave the man 25 cents, how much change would you get back? (Repeat)	20
9. How many days would it take you to shoot down 28 planes if you shoot down 4 each day? (Repeat)	30
10. How tall, do you think, is the average woman?.....	10
11. How many stripes are in the American flag?.....	5
12. How far do you think it is from England to the United States? About how many miles?.....	15
13. When is Abraham Lincoln's birthday?.....	15
14. (Digit span) 9-4-3-6-..... (practice—not scored)	
3-1-7-4-2 }	(either one correct)
8-5-7-6-3 }	

This test was administered to 100 inductees together with the verbal portion of the Wechsler-Bellevue Scale. On the basis of an item analysis, the items were rearranged in order of difficulty with the exception of the digit span which was reserved for the final portion of the test, inasmuch as it required separate instructions. Next it was desired to find that point on the scale which would serve as a differentiation point between adequacy of intellectual functioning and inadequacy or suggested inadequacy.

An inspection of table 18 will reveal the discrimination value of the test. Column 1 is the score on the test. Column 2 shows the number of recruits in the sample of 100

¹By Joseph G. Colmen, Lieutenant, junior grade H-V(S) U.S.N.R.

²Because time was short only 3 subtests of the Wechsler-Bellevue Scale were used: Similarities, digit span and arithmetic. Wechsler, D.: Measurement of Adult Intelligence. Williams & Wilkins, Baltimore, 1941. p. 248.

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

TABLE 18.—Results of test in 100 subjects

Score on test	Number of inductees obtaining score	Wechsler-Bellevue Scale (verbal)					
		Defectives		Borderlines		Dull Normals or better	
		Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Column 1	Column 2	Number	Percent	Number	Percent	Number	Percent
14.....	0						
13.....	0						
12.....	3					3	100
11.....	4			1	25	3	75
10.....	16			6	62	10	38
9.....	16			11	69	5	31
8.....	19			16	84	3	16
7.....	15			14	93	1	7
6.....	13	2	15	10	77	1	8
5.....	5	2	40	3	60		
4.....	2	1	50	1	50		
3.....	4	4	100				
2.....	3	3	100				
1.....	0						
0.....	0						
Total.....	100	12		62		26	

subjects obtaining those scores on the test. Columns 3 through 8 indicate the classifications received by these recruits on the verbal portion of the Wechsler-Bellevue Scale. Of these, columns 3, 5, and 7 show the number of recruits obtaining that classification, whereas columns 4, 6, and 8 give those numbers converted into percentages. The percentages have more significance because they show at a glance how the Differentiation Test and Wechsler-Bellevue Scale conform. The percentages of Dull Normals or better can be seen to decrease as the scores on the Differentiation Test decrease. The Borderlines increase, then decrease in a humped curve as the scores on the Differentiation Test decrease. The percentages of mental defectives can be seen to increase as the scores on the Differentiation Test decrease.

Although 12 percent of those tested scored below 65 on the verbal portion of the Wechsler-Bellevue Scale, it must not be assumed that 12 percent of the incoming recruits are defective. The indication is that of those referred for psychologic examination 12 percent were found to be inadequate intellectually. To present this more clearly, a sample of 5,787 recruits was taken. Of this number, about 4 percent were referred for psychologic examination, but of the entire group only about $\frac{1}{2}$ of 1 percent

were found to be mentally defective. Nearly 12 percent of the referrals, however, were mentally defective.

It must not be assumed that the men who did score below 65 on the verbal portion of the Wechsler-Bellevue Scale were summarily discharged from the service. It means only that these men were transferred to the neuropsychiatric service for intensive psychologic examination and further disposition, either to duty or discharge.

It will be observed, nevertheless, from table 18, that inductees scoring 8 or better on the Differentiation Test can be considered safely as being above the mental defective range, because in this category, in one category below it, and in all categories above it, none of the men tested by the Wechsler-Bellevue Scale scored as a mental defective. The percentage of men apparently who can be thus tested and classified in 5 minutes is 58. The group scoring 7 may be sent to duty without too much risk, thus bringing to 73 the percentage of referrals who can be tested and classified in little more than 5 minutes. The other 27 percent will require some additional testing.

In practice this procedure should serve to reduce the number of suggestive mental defectives and thus allow the psychologists more time for thorough examinations of other recruits.

CHAPTER 11

NEUROPSYCHIATRIC SCREENING OF A MILLION MEN¹

THE FUNCTION OF THE NEUROPSYCHIATRIC CLINIC AT A NAVAL TRAINING CENTER

It is the function of the neuropsychiatric clinic at a naval training center to weed out, during the original training period, those mentally unfit for Navy life. The result is a more efficient personnel entering Navy routine from "boot camp," and a minimum of maladjusted, unhappy individuals.

Those "mentally unfit for Navy life" include all recruits having any mental, neurological, or psychosomatic difficulties which are of such severity that the individual will be more of a detriment than an asset to the Navy. Those rejected are not necessarily mentally unfit for a less rigorous civilian life.

The psychiatrist or psychologist assigned to such duty is apt to find himself between two opposing viewpoints. It is well that he adopt a "middle-of-the-road" attitude, and continually bear in mind his fundamental objective: "To reject only those who, in his opinion, would be more of a detriment than an asset; and to accept only those who, in his opinion, will be more of an asset than a detriment."

The opposing viewpoints, mentioned above, are quite natural results of human nature working under different environmental circumstances and under different motivating conditions.

The job of the recruiting station on the one hand, during voluntary enlistment, is to "sell the Navy to prospective sailors," so that the Navy will be able to meet its personnel requirements. When the percentage of rejections runs high at the training center, the recruiting officer is likely to feel that some of his efforts have been in vain.

On the other hand, when the percentage of rejections runs low, those whose job it is to train efficiently an unorganized group into a smooth-running, well-organized company in a relatively short time are apt to feel that they are being handicapped by certain recruits who are a little

slower in learning, or who are having some trouble in adjusting to their new mode of life.

In addition to the two mentioned examples, other individuals may lean toward one or the other viewpoint and may tend to exert pressure on the psychiatrist and psychologist. The family and people in the home town, the draft board, even those in government positions representing the areas from which the recruits are coming, may feel that certain individuals should or should not be in the service, or that the percentage of rejection is either too high or too low. Then, of course, the recruit exerts his influence. Some recruits will, either consciously or subconsciously, develop almost any psychosomatic symptoms in order to be discharged, while others will beg to stay in service, in spite of known neuropsychiatric or psychological handicaps.

If the psychiatrist and psychologist are consistent in following the above formula (to reject only those who would be more of a detriment than an asset, and to accept only those who would be more of an asset than a detriment), and if there is a variation in the quality of the incoming recruits, then one would expect a corresponding fluctuation in the percentage of rejections.

It is the purpose of the present article to present a monthly percentage of rejections throughout an approximate 5-year period, involving the examination of over a million men, and to analyze the possible relationship between the rise and fall of the percentage rejected and the factors which might cause corresponding variations in the quality of incoming recruits. In addition, since psychiatrists and psychologists are human, and therefore subject to variations in judgment, the records may show some variations in the percentage of rejections which are due in part to the attitude and techniques of those making the judgments, rather than to the variations in the quality of recruits.

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THE PROCEDURE OF DETERMINING THOSE UNFIT FOR NAVY LIFE

When recruits report to the training station a brief psychiatric and psychological examination is included as a part of the general medical examination. Those who evidence serious neuropsychiatric difficulties are referred directly, as "admits," to the neuropsychiatric clinic. The less serious cases, who indicate possibilities of inability to adjust to Navy life for neuropsychiatric or psychological reasons, are given a 3-week period of trial duty. This period is the same as for other recruits, with the exception that at the end of the period the company commander writes a report describing his opinion of the recruit's adjustment to Navy life. This report is sent to the neuropsychiatric clinic and the recruit is interviewed at the clinic. Depending upon (a) the nature of this report, (b) the seriousness of the neuropsychiatric or psychological condition, and (c) the recruit's motivation and subjective experiences, he is (a) admitted as a patient, (b) given a further 3-week period of trail duty, or (c) released to full duty.

In addition to the company commander, any officer dealing with the recruit's training, the chaplain, or a medical officer in another clinic, can refer the recruit to the neuropsychiatric clinic for examination. The recruit may also report to the neuropsychiatric clinic voluntarily if he feels he is having difficulty in adjustment. All of these referrals are dealt with in the same way as the trial duty cases.

When a recruit is admitted to the clinic as a patient, he is: (a) given more thorough neuropsychiatric and psychological examinations by the psychiatrist and psychologist; (b) is interviewed by the Red Cross psychiatric social worker (attached to the clinic) in an effort to adjust various personal and family problems; and (c) if any organic brain involvement, brain injury, or convulsive disorder is suggested, an electroencephalographic examination is made of all brain areas.

When all of the data are gathered, the recruit appears before the "aptitude board," consisting of a minimum of one psychiatrist, one psychologist, one medical officer, and one line officer who deals with recruit training. All aspects of the case are then considered together—his intelligence, his psychosomatic and neuropsychiatric condition, his company commander's report of trial duty, and the recruit's own motivation and wishes. Consideration of the latter factors may be interpreted from an altruistic standpoint; however, experience has shown the recruit's motivation to be just as important as the other factors in determining his aptitude for the service. On the basis of all of these factors the aptitude board then decides

whether the recruit shall be discharged by reason of unsuitability or shall continue in the naval service.

ANALYSIS OF FACTORS DETERMINING PERCENTAGE DISCHARGES

Figure 2 shows the number of recruits given psychiatric and psychological screening examinations at the U. S. Naval Training Center, Great Lakes, each month from April 1942 through December 1947. Months are indicated by the first letter of the name of the month. Figure 3 shows the percentage admitted to the neuropsychiatric clinic and the percentage discharged as unsuitable for naval service, during the same period.

It is figure 3, the percentage discharged, in which we are mainly interested. Some tell us that the percentage has been too high, others insist that it has been too low. The fundamental contribution of the neuropsychiatric clinic to the efficiency of the naval service is not to obtain a certain percentage discharged, be it high or low. The fundamental purpose of the neuropsychiatric clinic is to examine each individual, to accept him if he will be an asset to the service or to reject him if he would be a detri-

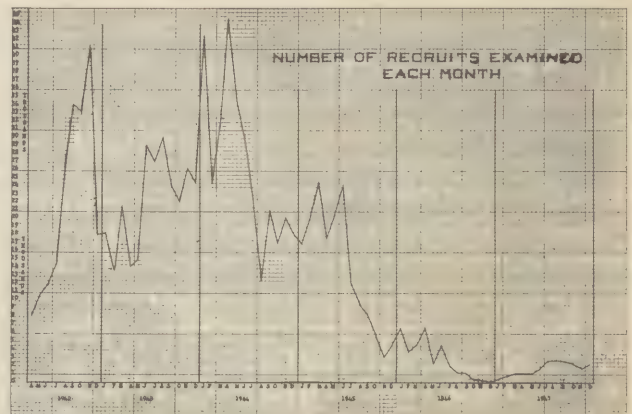


Figure 2.

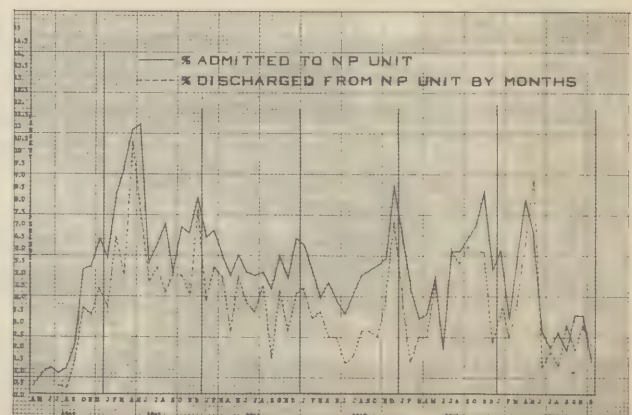


Figure 3.

ment to the service. The only error of the neuropsychiatric clinic is to accept a man who turns out to be a detriment, or to reject a man who would have been an asset.

The percentage discharged is merely a by-product of this fundamental objective. When the quality of incoming recruits is poor the percent rejected must of necessity be high; when the quality of incoming recruits is good the percentage discharged will automatically drop.

Figure 3 shows considerable variation. Moderate variation is expected in any measurement. More significant variations should be explainable by events and conditions which determine the quality of those being examined. The remainder of this section will therefore be an attempt to trace the curve throughout the war and early postwar periods and to explain the causative factors for significant high and low percentages discharged.

Low regions of the curve should correspond with superior recruits, high regions with inferior recruits. The judgment and technique of the psychiatrist and psychologist should be a constant factor, but being subject to error, some discharge variation may have to be explained by variations in the behavior of the neuropsychiatric staff.

In tracing the relationships between causative events and their effects on the curve, one should bear in mind that the curve may not change abruptly the same month as the causative event. On the one hand, events may be anticipated by the public and the potential recruit may decide to enter the Navy on the basis of an expected condition. On the other hand, there is a lag. An event may affect the quality of recruits, but the discharge of those recruits may occur any time during the 3-month training period. With this double spreading effect, one may expect high and low regions on the curve near the time of the causative event.

THE EARLY MONTHS OF THE WAR

During the first half-year of the war, the majority of people had not yet adjusted their life activities to the new situation. Most people continued working in the same locality. Some were drafted, but they went into the Army, for the Navy was then on a voluntary basis. A war had begun, and we seemed to be on the losing side. The future looked dark, military life was dangerous. The safest thing to do was to wait until the draft card arrived.

Recruits who voluntarily enlisted at this time were, in general, superior specimens of high motivation and initiative. Less than 1 out of 200 of these recruits were discharged, *less than one-twentieth of the percentage of a year later*, about one-eighth of the average throughout the rest of the war.

A factor in addition to the quality of recruits during this period was that the neuropsychiatric clinic was still

in process of organization, which may have decreased the percentage screened out.

THE SECOND HALF-YEAR

By the second half of the first year of the war, more people were adjusting to the new situation. It was becoming the usual, rather than the unusual thing, to volunteer for the service. Figure 2 shows how the incoming recruits increased from 12,000 to 42,000 per month during this period. They volunteered, but they had delayed in doing so. They were not quite so well motivated as their predecessors. Within 2 months the percentage discharged rose from $\frac{1}{2}$ to over 3 percent.

THE BEGINNING OF THE NAVY DRAFT

In February 1943, the Navy, for the first time, began to draft. Incoming recruits no longer were coming by choice, those with initiative and daring were fewer, many wished they were back home. *Within a 3-month period the percentage discharged rose from below 4 to over 10 percent, the highest point during the war.*

THE USE OF ADDITIONAL PSYCHIATRISTS AT RECRUITING AND INDUCTION STATIONS

When the percentage discharged reached its peak, following the beginning of the Navy draft, concern developed regarding the number of rejectees. Consequently, about May 1943 the Navy sent out additional psychiatrists to improve screening procedures at some recruiting and induction stations. As a result, the percentage discharged from the training centers dropped about June and never returned to the high peak of early 1943.

THE SEASONAL CYCLE

A glance at the curve from the middle of 1943 to the end of 1946 shows a tendency toward a seasonal variation. The percentage tends to drop during the summers and rise during the winters. It appears that (a) there is a better selection of recruits during the summer, (b) neurotic tendencies become relaxed during the balmy days, or (c) psychiatrists and psychologists become less severe in their examining during the warmer days.

One may further note that in 1943, 1944, and 1945, the peak of the winter rise occurred in December. In December homesickness increases, the desire to be home for Christmas coupled with the inability to do so intensifies the strain of military training. During this period more recruits come to the clinic with nervous tension, headaches, and dizzy spells. These conditions occur partly on the voluntary level, bordering on malingering, but also at the subconscious level. The nervous tension really does become worse.

It is interesting to note that in 1946 the percentage drops during December. The present article was in preparation during that time and the psychiatrists and psychologists became aware of the "Christmas peak." The awareness of the effect probably caused an overcompensation in the minds of the examiners, so that a special effort was made to avoid sending any one home who might be malinger. As a result the "Christmas peak" became reversed for 1946. In 1947 all boots entering before Thanksgiving were allowed 2 weeks' Christmas leave. As a result a Christmas peak did not occur.

THE END OF THE WAR

With the end of the war in August 1945, the service was no longer a dangerous organization to be in. Therefore, it became an escape mechanism for many who could not adequately adjust at home, at school, or at work. Many recruits entered the service as an act of spite after an argument with the girl friend or with the family. As a result many incoming recruits were maladjusted individuals. They could not adjust to civilian life and they could not adjust to military training. Consequently the winter peak following the end of the war was the highest of the winter peaks.

THE SUSPENSION OF THE NAVY DRAFT

In January of 1946 the Navy Draft was suspended. The incoming recruits were those who wanted to be in the service and their motivation was therefore higher. The percentage discharged in early 1946 showed a quick drop from the winter peak.

THE DIMINISHING OF THE GI BILL OF RIGHTS

On 6 August 1946 the educational benefits of the GI bill of rights were decreased for further incoming recruits. As a result, those interested in furthering their education were less likely to enlist. The average intellectual level of the recruits became lower, and the number of dull normal and borderline intelligence cases increased. These were less able to adjust to Navy training and more entered the clinic for this reason.

THE PRESENT TREND

The early 1947 trend of Navy recruits has been described by the authors in a separate article.² This trend revealed that an unusually large number of recruits at that time were of low intelligence and that a very large number of them were using the Navy as an escape from

civilian maladjustments, a composite of points previously described under the headings "The End of the War" and "Diminishing of the GI Bill of Rights." These tendencies led to increasing percentages of discharges through May 1947, but with the closing of school, the quality and intelligence of the average recruit was greatly raised by the influx of high school graduates, bringing the percentage of discharges for June 1947 down to 1.93 percent. Although rather large numbers of low intelligence are again finding their way into the Navy, considerable numbers of recruits who have completed high school are still coming in. The elimination of mustering-out pay for those enlisting after 30 June 1947 appears to have had no appreciable effect on the quality of enlistees. In addition, the neuropsychiatric clinic has made a conscious effort to discharge only those recruits who in the opinion of all members of the aptitude board are entirely beyond salvaging, due to the increasing need for replacements because of the large number of expiring enlistments during this latter period. The paradoxical crossing over of the curves in May 1947 was due to the accumulation of a backlog of discharges from April who were not discharged until the following month. This was repeated in September 1947.

TYPES OF DISORDERS DETERMINING UNSUITABILITY

An analysis of discharges for 1946 gives a general idea of the types of conditions which render the recruit unfit for Naval service. Table 19 gives the nearest percentage of each condition encountered. Many patients exhibit a combination of two or more of the disorders; the classification is based on the most pronounced condition of each case.

TABLE 19.—*An analysis of the neuropsychiatric diagnoses for the rejection of recruits*

Diagnosis and reason for discharge:	Percentage
Personality disorder	64
Enuresis	11
Mental defective	5
Intracranial injury and neurological	4
Somnambulism	3
Migraine	3
Epilepsy:	
Grand mal	1
Petit mal	1
Convulsive disorder (psychomotor and mixed)	1
Psychopathic instability	1
Psychoneurosis (anxiety reaction)	1
Psychoneurosis (unclassified)	1
Schizoid personality	1
Speech defect	1
Pathologic sexuality	1
Psychoses	1

²Reitzel, E. C.; Miller, V. L.; and Knox, G. W.: Psychiatric Screening in the Post-war Navy. Published in mimeograph form by the Medical Department, U. S. Naval Training Center, Great Lakes, Ill., April 1947, 15 pp.

It is quite evident that personality disorder (inability to make an adequate social adjustment) is the outstanding reason for discharge. This is the expected result, since the Navy is a social organization where cooperation and harmony between individuals is the most fundamental necessity. Many cases of personality disorder are accompanied by a mild nervous condition, dull normal intelligence, or both.

Although a mental defective diagnosis was given to only 5 percent of the cases, this condition in milder form contributed to the decision of Unsuitability for many cases otherwise classified, especially of the personality disorders. The classification of mental defective is given only to those of moron level or below (less than 70 I. Q.). Many personality disorder cases were either of borderline intelligence (70 to 80 I. Q.) or of dull normal intelligence (80 to 90 I. Q.). Twenty percent of all discharges were below normal intelligence, 15 percent falling within the I. Q. range of 70 to 90 and 5 percent being below 70.

Seventeen percent of all discharges exhibited symptoms suggestive of organic involvements and were therefore given electroencephalographic examinations. Results indicated that only 7 percent actually had organic involvements, the other 93 percent being functional in nature, but 10 percent of all cases had functional disorders which simulated symptoms of organic conditions.

SUMMARY

There has been considerable debate concerning the percentage of recruits which should be discharged from the naval neuropsychiatric clinics of the training centers.

Consequently a survey was made of the neuropsychiatric discharges out of over a million recruits examined in approximately a 5-year period at the world's largest naval training station, throughout the war and early postwar periods.

The discharge of a certain number of recruits, be it high or low, is not the fundamental objective of the neuropsychiatric clinic. The fundamental objective is to discharge only those who would be more of a detriment than an asset and to retain those who will be more of an asset than a detriment.

With this objective, a fluctuation in the percentage discharged is expected with a variation in the quality of incoming recruits. This variation in the quality of recruits was determined by many changing conditions throughout the war and postwar periods.

Some of the factors which determined the fluctuation in the quality of recruits, and, consequently, in the percentage discharged, are pointed out.

ACKNOWLEDGMENT. — The authors are indebted to Capt. Earl Richison (MC) USN, for valuable advice in the preparation of this article; to the numerous officers attached to the Neuropsychiatric Unit of U. S. Naval Training Center, Great Lakes, Ill., since April 1942, for accumulation of the data; and to Bertha P. Kuznik, PhM2c, V-10 USNR, and Neal R. Roy, PhM3c, USN, for assistance in preparation of the manuscript and charts.

CHAPTER 12

A PSYCHOMETRIC PROCEDURE FOR SCREENING MENTAL DEFECTIVES¹

This chapter describes a clinical psychometric method designed for the specialized procedure of screening at the Neuropsychiatric Observation Unit of the United States Naval Training Station, Sampson, New York. The demands of screen testing have resulted in the development of a somewhat new and different interpretation of the use of test items in mental measurement.

The customary aim of mental measurement has been to obtain a large sample of behavior from a variety of test situations in order to make an estimate of average mental ability. The purpose of screen testing is to predict from as few items as possible whether a particular person's ability is above a given minimum. In this there is no question of the complete evaluation of a person's abilities—his strong points, his weak points, his maximum range of capacity—but a question only of acceptability for satisfactory naval service.

Customary or over-all mental testing requires testing conditions that often are not available. It requires that the subject be well motivated; that conditions and directions be standardized; that the person be relatively free from fear of the examiner and in rapport with the examiner. Screen testing, on the other hand, can and frequently must be administered under a variety of conditions, mental states, and time limits. The latitude permissible derives from the fact that the goal of screen testing is not the traditional I. Q. or mental-age score but the detection of supraminimal ability. This does not require a large and representative sample of a testee's behavior but only enough of a sample to establish whether ability is above a given level.

Tests that attempt to determine an I. Q., M. A., or other

over-all evaluation include failures in the final score as well as successes in specific test items; the final score is thus attenuated by the failures. Screen tests, by contrast, disregard specific failures because a subject is not penalized for failing a specific item if he is able to pass another item of equal difficulty. In the screen tests only discriminatory items are used; that is, items which are concentrated at the borderline level where the acceptable may be separated from the questionable recruit candidates. The probability has been empirically determined to be at least 99 in 100 that anyone who passes one of the tests has an I. Q. above 70 and therefore is not mentally defective. These test items require no elaborate testing conditions except that they must be administered individually; they can even be interpolated in the conversation of the interview. Even such brief and apparently casual tests have been shown to have an error of less than 1 percent.

It has been found that a few selective items may be arranged in a graded series (to be referred to later as the five-phase program), so that the examiner may quickly weed out the men who need more intensive examination. The saving of time is of practical importance, because a great deal of the screening has to be done on the "receiving line" during the final physical and mental reexamination of the recruits before they enter training. By the screen tests, in a few minutes it is possible to certify as acceptable a large number of recruits and thereby save more time for careful examination in the borderline cases. There is no short-cut method of examination in these cases. No man should be presented to the Aptitude Board (for consideration for discharge from the service) who has not been thoroughly and intensively observed and tested.

The actual program consists of a five-phase procedure which groups test items in five levels of intensity of testing, each successive level sampling more of the person's

¹This material was prepared in August and September 1943, by Harold M. Hildreth, Lieutenant H-V(S) U.S.N.R.; J. Arthur Wheeler, Jr., Lieutenant, junior grade D-V(S) U.S.N.R., and Stanley B. Williams, Lieutenant, junior grade H-V(S) U.S.N.R.

total abilities. These stages can best be described by following the course of a recruit through testing.

PRELIMINARY SCREEN TESTS

Phase 1.—The tests consist of brief oral questions, such as definitions, arithmetic problems, number-series and reading comprehension. Superficially similar questions have frequently been used by interviewers, but the battery of items used in these screen tests has been carefully selected and statistically validated (1). As a result, the tests, although brief, have predictive value. From a positive response to a single question, such as: "What does 'tolerate' mean?" the psychologist can predict that the recruit on further testing will prove to have a mental age above the Navy's minimum. The error of this prediction is statistically determined. If there is a negative response to the question, no prediction whatever may be made and no general statement of the recruit's intelligence is justifiable. All that is indicated by a negative response (failure) is the need for further testing. Following a negative response to three or more of the screen test items, the recruit is sent to the Neuropsychiatric Unit where he undergoes the other four stages of the testing program. If a recruit passes this preliminary screen test, he is sent to training.

It is emphasized that the procedure described is not, strictly speaking, intelligence testing and is in no way a substitute for it. It is primarily a means of meeting a practical situation. It is a useful way of dividing incoming recruits into two groups, the acceptable and the questionable. At Sampson the questionable group comprised about 10 percent of all those seen by the psychologist; thus a great deal of time was saved by this first phase. On further testing, this group was reduced in number. Many of the doubtful candidates were sent to training duty.²

Phase 2.—In most cases phase 2 is administered in the neuropsychiatric ward. It consists of two paper-and-pencil tests from the Kent Battery: Arithmetical Reasoning and Easy Directions, each requiring 2 minutes' testing time. The two tests can be given and scored in 6 minutes. These tests have been described elsewhere (2) (3) (4) (5). They are used here as separate screen tests, apart from the complete Kent Battery. On the basis of 6 months' experience, certain critical minimum scores have been determined, which, if exceeded by a recruit, indicate acceptability and thereby obviate the need for more extensive testing. These minimum scores are: 17 points on the Easy Directions combined with 2 points on the Arithmetical

Reasoning (raw scores); or 11 points on the Easy Directions combined with 3 points on the Arithmetical Reasoning (raw scores).

Less than 1 percent of all recruits who have exceeded the minimal scores have later been considered rejectable by the Aptitude Board. Although the Aptitude Board's decisions are based on over-all criteria, which fluctuate from time to time, they probably represent the best single estimate of service aptitude available at present. It is worth while to mention also that the distribution of scores made by rejected recruits shows a sharp break between 10 and 11 points on the Easy Directions test; many score 10 and below and only a few score 11 or higher. There is likewise a similar sharp break between 2 and 3 points on the Arithmetical Reasoning.

At present, if a recruit equals or exceeds the minimal score in the phase 2 tests, he is immediately sent to training, provided that the interview does not reveal any gross behavior disorder. If the recruit scores below the minimal level, he is carried on to phase 3 of the testing program.

Phase 3.—Phase 3 consists of the remainder of the Kent Battery; namely, the Revised EGY and the Verbal Opposites. Together these require from 5 to 10 minutes' examining time. Again, on the basis of accumulated cases, statistical analysis showed that if a man who had scored less than the minimal scores on the tests in phase 2 attains a score equivalent to 12 years' mental age (raw score 24) or better on the EGY, he will not prove to be rejectable by the Aptitude Board on grounds of mental deficiency. Likewise, if he scores 13 years (raw score 18) or better on Verbal Opposites, he will meet the Navy's minimal requirements. Similarly, if he scores a mental age of 10 or higher on all the tests of the Kent Battery, he is sent to duty. If he scores below these minimal levels, he is retained for further observation and is tested under phase 4 of the program.

Phase 4.—A fairly satisfactory judgment of intelligence level can be obtained by the use of three of the verbal sub-tests of the Wechsler-Bellevue Scale (Information, Arithmetic, and either Similarities or Comprehension) (6). These can be administered in about 20 minutes, and together with the Kent Battery comprise a fairly solid basis for predicting success of the recruit in naval training.

Usually the recruit who is given these tests is the man who falls slightly below the criterion level on the Kent Battery. Not infrequently he will score high enough on the abbreviated Wechsler-Bellevue Scale for the psychologist to be sure that he meets at least the minimum standards. Such a recruit is sent immediately to duty without further testing. If he does not score higher, and

²A check on the effectiveness of the screening is the number of rejectable recruits discharged during their subsequent training period. In 5 months, these cases amounted to only two-tenths of 1 percent of all cases referred to the psychologists. This compares favorably with the number reported from stations where the longer Kent Battery is reported as used for screening "on the line."

therefore remains in the doubtful category, phase 5 is administered.

Phase 5.—Phase 5 is not rigidly defined. It consists of any one or all of the following tests: Complete Wechsler-Bellevue, Revised Beta Examination, Stanford-Binet, Otis Self-Administering Test, the Rorschach Ink-Blot test, and such other special tests as are clinically indicated. It is this fifth phase which requires so much of the examiner's time and which is necessary for a complete evaluation of a questionable case. Usually the complete Wechsler-Bellevue test is given. Every recruit who is brought before the Aptitude Board with recommendation for discharge for reasons of mental deficiency is given the tests in phase 5. This differs from the usual procedure in that it comes fifth in the "screening" program rather than first or second, in order to economize examination time.

CONCLUSION

It cannot be emphasized too strongly that such a five-phase procedure as has been described is only a tool at the disposal of the clinical psychologist. In using this objective instrument, he must exercise his experienced judgment. He must always evaluate test data in the light

of observed behavior and background, and, as every clinical psychologist knows, there are cases in which exceptions must be made.

The usual case history is taken of every recruit who reaches phase 2 of the program. Personality factors, language handicap, bizarre responses, and anomalous behavior disorders are detected in the case history interview. This serves as a check against test information.

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CHAPTER 13

A NEUROPSYCHIATRIC QUESTIONNAIRE FOR GROUP EXAMINING*

The questionnaire presented here was developed to meet the needs of a large neuropsychiatric service in a naval hospital. Designed as an aid in psychiatric examining, it has proved useful both as a time-saver and as an instrument of investigation.

Essentially the questionnaire is a group method of conducting a preliminary psychiatric interview and obtaining the psychiatric history. Group methods are relatively new in psychiatry, except in the field of psychotherapy, and may eventually have considerable usefulness.

One basis for this expectation is the steady development of personality tests and adjustment inventories. Although intended primarily for use with "normals," the widespread use of these psychometric devices by business and industry has demonstrated the utility of group methods for eliciting significant personnel information. More recently psychologic tests for aviation cadets have shown that pertinent and reliable biographic data can be obtained by means of a questionnaire.

Each person is, of course, an individual problem. Clearly it is absurd to think that any group psychometric device can supplant the personal interview. Such devices may, however, supplement the interview to a valuable degree and allow a more effective distribution of the examiner's time.

An adequate and comprehensive history is important for every neuropsychiatric patient, but no part of the psychiatric examination is more time consuming. A great many questions must be asked. Most of these questions are answered negatively, because in many respects the patient's personal and family background is not unusual. Discovering the unique and atypical elements in a patient's past life—the primary purpose of the history—requires a disproportionate amount of the examiner's time. It is the function of the questionnaire to do this

questioning, and to uncover the significant information without expenditure of time and energy on the part of the examiner.

At the time of the personal interview the patient's questionnaire can be reviewed in a minute or two. Details which are not clear may be investigated further. The remainder of the time ordinarily spent on the history is then available for investigating the immediate reaction-pattern of the patient, for discussing the problems which seem most important to him, and for psychotherapy.

Wording of the questions of the questionnaire is the result of considerable experiment. Experience has shown that in their present form they are easily comprehended and answered by the patient.

Scanning of the questionnaire has been facilitated for the examiner by casting the questions in a yes-no form. "Yes" indicates positive information. Most of the questions are answered negatively, indicating average or typical experience.

We have labeled the questionnaire, in the form given to patients, Interview Questionnaire.

INTERVIEW QUESTIONNAIRE

FROM: Your Ward Medical Officer.

Your Ward Medical Officer will have a personal interview with you as soon as possible. In the meantime you can help by giving in advance some of the information he will require. Consider these questions as though he were asking them personally, and keep them confidential. If there are any you would rather not answer, leave them blank. There will be time later to talk more about the things that seem most important to you.

Name _____

(Last Name) (First Name) (Initial)

Rate _____ Date _____

CC 1. What is your chief complaint or trouble at the present time? _____

2. What other complaints or difficulties do you have _____

PI 3. When did you first notice these symptoms? _____

* By Harold M. Hildreth, Lieutenant H(S) U.S.N.R., and Joel M. Hill, Commander (MC) U.S.N.R.

4. When did they begin to get worse? Give details.....
5. When did you first go on the sick list for these complaints?
6. Where?
7. Tell all the hospitals or other medical activities where you were treated, and give the dates.....
- PH 8. Where were you born?.....
Date of birth.....
9. How many children including yourself were there in the family?
10. Where did you come in the family; were you first, second, third, or what?.....
11. When you were growing up did you live with someone besides your parents most of the time?.....
If so, with whom?.....
12. Were you sick a lot during childhood?.....
What serious illness did you have, and at what age?.....
13. Were you inclined to be nervous or high-strung?.....
14. Did you feel you were punished more than the average child?
15. Were you the favorite child in the family?.....
Did others consider you the black sheep of the family?.....
16. Did you stammer or stutter?.....
If so, at what age did you stop?.....
17. Did you talk in your sleep?.....
If so, at what age did you stop?.....
18. Did you walk in your sleep?.....
If so, at what age did you stop?.....
19. Did you wet the bed?.....
If so, at what age did you stop?.....
20. Did you bite your fingernails?.....
If so, at what age did you stop?.....
21. Were you afraid of the dark?.....
Up to what age?.....
22. Did you often have bad dreams or nightmares?.....
23. Were you inclined to be overconscientious?.....
24. Did you feel lonely quite a bit of the time?.....
25. Did you have a hot temper?.....
26. Did you have the feeling nobody cared much about you?
27. Did you feel uncomfortable in crowds?.....
28. Did high places frighten you?.....
29. Name any special fears you had.....
30. What was the last grade you completed in school?.....
How old were you when you stopped?.....
31. How many grades did you fail?.....
Which ones?
32. Did you find it hard to learn?.....
33. Were you fighting with the teachers much of the time?.....
34. What sort of work did you do after you left school?.....
Tell the different jobs you had and how long you held them.
35. How many times were you fired?.....
36. Were you inclined to fight with the boss quite a bit?.....
37. If you have any form of recreation or sport or any hobby you are especially interested in, list it here.....
38. Did you ever run away from home?.....
If so, how old were you?..... What was the reason?
39. Were you ever arrested, or in a juvenile court, or in a reform school?..... If so, give the details of it
40. Have you "bummed" around the country?.....
If so, tell about it.....
41. Were you ever picked up for vagrancy?.....
42. How old were you when you became conscious of yourself sexually? For example, how old were you when you first learned about masturbation?.....
and how old were you when you began sexual activity with the opposite sex?.....
43. Are you married or single?..... If you are married how old were you at the time?.....
Were you ever married before?..... Have you ever been separated or divorced?.....
If you have any children, how many?.....
How do you get along with your wife?.....
44. Have sexual problems worried you a good deal?.....
Did they worry you when you were younger?.....
45. What church did you go to when you were young?.....
46. How much religious interest do you have now; are you more interested or less interested than the average person?
47. Has there been any marked change in your religious attitudes at any time during your life?.....
If so, tell about it.....
48. Have you ever been hit on the head and knocked out?.....
If so, give dates and details.....
49. Have you ever had fainting spells?.....
If so, give details.....
50. If you ever had a nervous breakdown, or if you were especially nervous at some period of your life, tell about it
51. When did you enlist?.....
52. When were you called to active duty?.....
53. What was your rate then?.....
54. What is your present rate?.....
55. List any military or naval service you had before this enlistment
56. If you have had foreign shore duty tell where it was and how long you were stationed at each place.....
57. If you have had sea duty what ships were you attached to?
- How long?
58. If you have been in combat, where was it?.....
59. How many air raids have you been through, if any?.....
Where?
60. If you have had any naval or military offenses, give details

- FH 61. If your father is living, state how old he is.....
Is he in poor health?..... If so, what is his trouble?
62. If your father is not living, how old was he when he died?..... What did he die from?.....
..... How old were you when he died?.....
63. If your mother is living, how old is she?.....
Is she in poor health?..... If so, what does she suffer from?.....
64. If your mother is not living, how old was she when she died?..... How old were you when she died?.....
65. Were your parents ever divorced or separated?.....
If so, how old were you at the time?.....
66. How well did your parents get along with each other?
67. Did any of your relatives (father, mother, brothers, sisters, aunts, uncles, cousins, grandparents) ever have a nervous breakdown?..... If so, give as much information as you can about it.....
68. Did any of your relatives have convulsions or fits?
- If so, give details.....
69. Have any of your relatives been in trouble with the law?..... If so, give details.....
70. Have any of your relatives committed suicide?.....
If so, give details.....
- ME 71. Do you feel sad and depressed quite often?.....
Most of the time?.....
72. Are you often moody?..... Most of the time?.....
73. Do you feel irritable and bothered by little things?
- Most of the time?.....
74. Are there times when you feel panicky, without knowing quite why you feel that way?.....
75. Do you have a general feeling that something is about to happen to you?.....
76. Do you have any worries?..... If so, describe them
77. Describe how you feel.....
78. How do other people feel and act toward you?.....
79. What do you think ought to be done for you?.....
80. How soon do you feel you'll be able to return to duty?

VALIDITY AND RELIABILITY

The neuropsychiatric questionnaire described here has been given three tests for validity and reliability.

1. For 100 patients questionnaires filled out on admission were compared with duplicate questionnaires filled out from three to eight weeks later. In most cases an almost verbatim consistency was found. The exceptions were a few psychotics, for whom the second questionnaire mirrored the progress of the psychosis.

2. Questionnaires were compared with histories taken

in routine manner by ward psychiatrists. Most of the positive information elicited by either method was found to have been elicited by both. On the average, however, one item of information uncovered by oral interview was missed by the questionnaire; and three items brought out by the questionnaire were overlooked in the interview.

3. Both questionnaires and interviews were compared with social service histories obtained in the course of hospital routine from outside sources. Using these histories as a criterion, questionnaires and interviews were compared in regard to the number of information items which were confirmed, the number refuted, and the number missed entirely. The two methods were found to be equally accurate, although the number of items missed by the questionnaire was smaller.

Information obtained by the questionnaire, then, is fully as accurate and noticeably more complete than that obtained by an oral interview as performed under normal working conditions on a crowded neuropsychiatric service. It can be seen that when the questionnaire is used, even a few minutes of supplemental oral questioning will enable the examiner to achieve results definitely superior to those ordinarily obtained in from 20 to 30 minutes of interviewing.

ADVANTAGES

Economy of time is the greatest single advantage of this group method of history-taking. As in the case of group psychotherapy, however, there are by-product values to be derived from the use of the questionnaire.

Morale.—One or two hundred patients brought in at one time means some men will have to wait a week or more for a complete interview. If these patients are given the questionnaire to fill out at once, morale is sustained for many days. The patients feel that thoughtful provision has been made for them, and that they have received immediate personal attention; consequently they are more content to wait their turn for an interview.

It is important to remember that most of the patients in a naval hospital are young. From their school experience they are accustomed to group tests, direct questions with true-false or multiple-choice answers, and questionnaires. They lack the resistance of the older generation to putting down on paper information about themselves. As products of modern education they not only accept, but are favorably inclined toward, efficient group methods.

Rapport.—Preliminary rapport is established by the questionnaire. When the patient comes in for an interview he has already had an opportunity to talk about himself in writing, and consequently feels the examiner understands some things about him.

The intimate and personal way in which patients respond to the questionnaire is illustrated by the following quotations:

Question 13 (nervous?): "Yes, doctor, I have been nervous all my life, far back as I can remember."

Question 24 (lonely?): "Yes, that is just how I always felt."

Question 39 (reform school?): "I was in St. Anthony's Reform School for 6 years."

Question 43 (get along with wife?): "We fight quite a bit over my drinking, when I'm home."

Question 49 (fainting spells?): "In the past I've fainted on several occasions from what I thought was being overheated; fainted once in front of hundreds of people during a Christmas play—in which I was one of the saintly actors!—(Never did live it down)."

Question 67 (nervous trouble in family?): "One brother had insanity for about a year, but has been drafted into Army."

Question 69 (relatives in trouble?): "My uncle was in jail for shooting and cutting up a couple of men."

Question 73 (feel irritable?): "Yes, I do. O.K. with something definite (sic) to work forward to."

Question 74 (panicky?): "That's right, I sometimes think I'm going to die in a few minutes."

Question 80 (return to duty?): "You're the Doctor. Whenever you say so."

Time for the patient.—The questionnaire not only gives the examiner more time, it also gives the *patient* more time. He has an opportunity to go into detail about his problems. He is not hurried.

The number of patients to whom this factor of time is important is surprisingly large. Those who stutter, or find it hard to talk, particularly welcome the opportunity to fill out the questionnaire. Frequently patients will spend 2 or 3 days on it, working in intervals of a few minutes each. A typical comment is: "When I talk to the doctor I get confused and can't remember what I want to tell him. *This way I can put it all down when I think about it.*"

Significant reactions.—Willingness to fill out the questionnaire provides an interesting sidelight on the patient. At one extreme are those patients who return the questionnaires, blank, within a few minutes. Disgust and scorn accompany it. "I won't fill out that damn thing. It's kid stuff." "It's a lot of —." Urging is futile for these men, but their reaction should be noted, because it is significant. We have found that these patients, almost without exception, turn out to be psychopaths. Occasionally paranoid personalities will respond in a similar manner.

At the opposite extreme are the combat and operational fatigues. Fatigue patients sit down and start working at once on the questionnaire. They may be shaky and able to work for only a few minutes at a time, but invariably they fill it out carefully and in detail. They take it for granted that it is for their own good or the doctor would not be asking them to do it.

An element of relief is also evident in these fatigue patients as they work. Speech is often an effort, yet they want to talk about themselves. The directed questioning of the questionnaire appears to give them a feeling of articulateness. Nor is it infrequent for these patients, after being stimulated into thinking more objectively about themselves, to reach the interview with an increased sense of perspective and insight.

Accessory information.—A number of impressions of diagnostic value come as a by-product of the questionnaire. Illiteracy, for example, is evident at once. The educational level of the patient can be estimated fairly closely by his use of words. Mental deficiency reveals itself by answers which demonstrate lack of comprehension of the question. The catatonic often blocks completely when faced with the specific task of the questionnaire, even though his ward behavior may have shown no gross tendency toward a stuporous reaction.

Those paranoids who are willing to fill out the questionnaire reveal their reaction-pattern in two ways. Some of them show the stiff perfectionist handwriting associated with the meticulous paranoid. And some of them fill out the questionnaire with a solid set of negative answers. As in an oral interview, they portray themselves as too perfect.

Aphasia is quickly apparent. One aphasic stated his chief trouble as "can't talk," and wrote he was ready for duty. "As soon as am better to talk and at home I will glad back to the submarine."

Schizoid reactions and early dementia praecox manifest themselves by unusual or bizarre responses. One patient, for example, in describing how he felt, wrote: "Anger and Judgment rule my thoughts." Another patient stated he would be able to return to duty "when I learn Life."

Special uses.—Neuropsychiatric consultations on medical or surgical patients are expedited with the questionnaire. When the neuropsychiatric staff is particularly burdened, the referring officer can help materially by having the questionnaire filled out by the patient in advance of the consultation.

The instructional value of the questionnaire should also be mentioned. Interns at this hospital, familiarizing themselves with psychiatric procedures, have discovered the questionnaire is a useful guide in interviewing patients.

CHAPTER 14

PSYCHIATRIC SCREENING TESTS AT A PRECOMMISSIONING CENTER¹

The problem of the construction and use of mass screening devices to aid in the detection of those men unfit for military service by reason of psychological inadequacy or psychiatric deviation has been the subject of frequent report. In most instances, however, these reports have dealt with findings on men at the recruit or induction stage, and the various tests have been standardized and validated on this preservice or early service population.

While it is true that the need for mass devices is not so pressing at present, it is felt that the findings from the present study, which was made in an attempt to test whether the screening techniques found so useful at the early service level continued to have validity and selective power when used with subjects having had longer, arduous, and dangerous duty, are of interest historically and have definite implications for the continuation of screening methods. The man who has "shipped over" for immature and impulsive reasons (often solely to obtain the 30-day leave), the man who has re-enlisted because the anxiety created in the attempt to readjust to civilian life was too great, and the "Regular" whose motivation has deteriorated with peace are instances in point, and are not infrequent in the author's experience.

With the change in function at this particular station from a "Boot" training center with men arriving into service directly from civilian life to a precommissioning center where all arriving for assignment had completed recruit training and the majority had already had sea duty, including combat experience, the psychiatric screening program had to be geared to detect not only those "missed" by previous examinations but also those in whom some deviation had developed during or because of their service.

Because of the limitation of personnel the utilization of some sort of screening device to detect the men requiring more extensive psychiatric attention was imperative. The two screening devices in use at this station during the recruit-training days, the Cornell Selectee Index,² and the Naval Personal Inventory No. 2, had proved of great value in the detection of the unfit and the misfit, and it was decided to continue these tests with the longer service group. Accordingly, all men coming to this station for assignment, with the exception of those coming directly from initial recruit training, were given these two tests as a part of their initial processing upon arrival. Those achieving scores in the critical ranges were subject to psychiatric interview from which the man might be sent on to unrestricted duty, noted for subsequent check, or admitted to the neuropsychiatric unit for further study. Other sources of admission to the neuropsychiatric unit were by way of consultation after referral from dispensaries and administrative offices.

In this survey the results from these 2 screening tests are compared for 2 groups. The control group is comprised of 1,936 men arriving at this station in the early months of 1945. From this group are excluded several processing groups (men are formed in groups of 60 for processing) known to be made up exclusively of men reporting to this station following a "survivor's leave," and of men known to have been transferred from their previous assignment because of unsatisfactory service. The primary consideration for inclusion in the control group was that, in a period of 3 months following their arrival on this station, none of these men had been admitted to the neuropsychiatric unit. The other group consisted of 206 men who had been admitted to the neuropsychiatric unit during the same period, with the only selection criterion being the availability of the original screening test blanks. Of this particular group approximately 5 percent had been admitted to the

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²A 32-item abbreviation of the C. S. I., Form N, including the 15 "stop" questions was used.

neuropsychiatric unit directly from the screening examination, and approximately 25 percent as the result of subsequent psychiatric re-check. The majority of the remainder were referred to the unit from dispensaries, either as a "first contact" or prior to the time for being called for checking. A small percentage were referred from chaplains' and administrative officers. Only 17, or 8.2 percent, of this group were restored to duty—all of the others were either separated from the service or transferred to a naval hospital as in need of treatment or prolonged observation.

Figure 4 shows the percentage distribution of scores for the Personal Inventory for both the control and admission groups.

Inspection of the statistics underlying these curves reveals that the average score for the control group was 5.05, while the mean score for the admission group was 11.36, and that only 10 percent of the control group equaled or exceeded a Personal Inventory score of 11, where 64 percent of the admitted group reached or exceeded this score.

Here the question of "cutting score" arises. Choice of a particular score as critical must of necessity be a function of the time and personnel available. Table 20 shows the cumulative percentages for the various possible scores occurring in the two groups.

Setting the "cutting score" too low places an undue burden on limited interviewing personnel—a critical score that is too high results in too many "misses," and while it has been the experience of the author that a goodly share of "misses" reach psychiatric attention by way of other sources, too great laxity in this respect is reflected in morale factors and in ineconomies of time and personnel. As based on the above figures a "cutting score" set at 9 will have brought to attention 75 percent of those

TABLE 20

Score on personal inventory	Admits	Nonadmits
	Percent	Percent
19.....	0.9	0
18 or greater.....	4.7	.1
17 or greater.....	11.0	.4
16 or greater.....	16.3	.8
15 or greater.....	25.0	1.5
14 or greater.....	35.1	2.6
13 or greater.....	45.1	4.5
12 or greater.....	53.3	6.5
11 or greater.....	64.4	10.1
10 or greater.....	71.1	14.1
9 or greater.....	75.9	18.3
8 or greater.....	81.2	23.8
7 or greater.....	83.6	31.2
6 or greater.....	88.4	39.0
5 or greater.....	92.2	46.5
4 or greater.....	93.1	57.2
3 or greater.....	95.5	68.9
2 or greater.....	98.4	82.9
1 or greater.....	99.3	94.1
(0 or greater.....)	100.0	100.0)

eventually requiring admission to a psychiatric service, and the "false positive" group will have been only 18 percent of the total number being processed.

Figure 5 shows the percentage distributions for the scores on the Cornell Selectee Index for the same two groups. Here the average Cornell Selectee Index score lies below 1 for the control group, and the average score for the admission group is computed at 1.9. Once again only approximately 10 percent of the control group reach or exceed the average score of the admission group.

Table 21 lists the cumulative percentages of the separate scores from the Cornell Selectee Index as an aid to selecting an efficient critical score.

TABLE 21

Cornell Selectee Index score	Admits	Nonadmits
	Percent	Percent
11.....	0.4	0
10 or greater.....	.8	0
9 or greater.....	1.2	0
8 or greater.....	1.2	.1
7 or greater.....	1.6	.1
6 or greater.....	4.0	.2
5 or greater.....	7.8	.4
4 or greater.....	16.0	1.3
3 or greater.....	32.5	4.6
2 or greater.....	50.9	10.5
1 or greater.....	72.7	24.6
(0 or greater.....)	100.0	100.0)

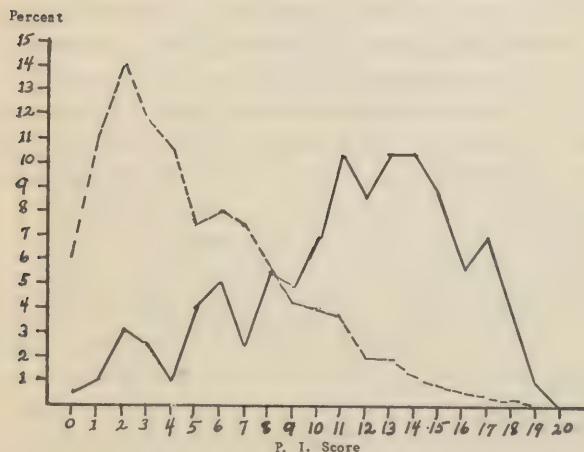


Figure 4.—Distribution of personal inventory score. Solid lines, men admitted to N. P. unit (206); broken lines, men never admitted to N. P. unit (1,936).

Thus, a critical score of 1 on the Cornell Selectee Index would be expected to cover 72 percent of the eventual admissions, while bringing about the interviewing of 24 percent of the group being processed as "false positives."

It has been the experience of the author that "false positives" occur more frequently with the Selectee Index than is the case with the Personal Inventory. This may be

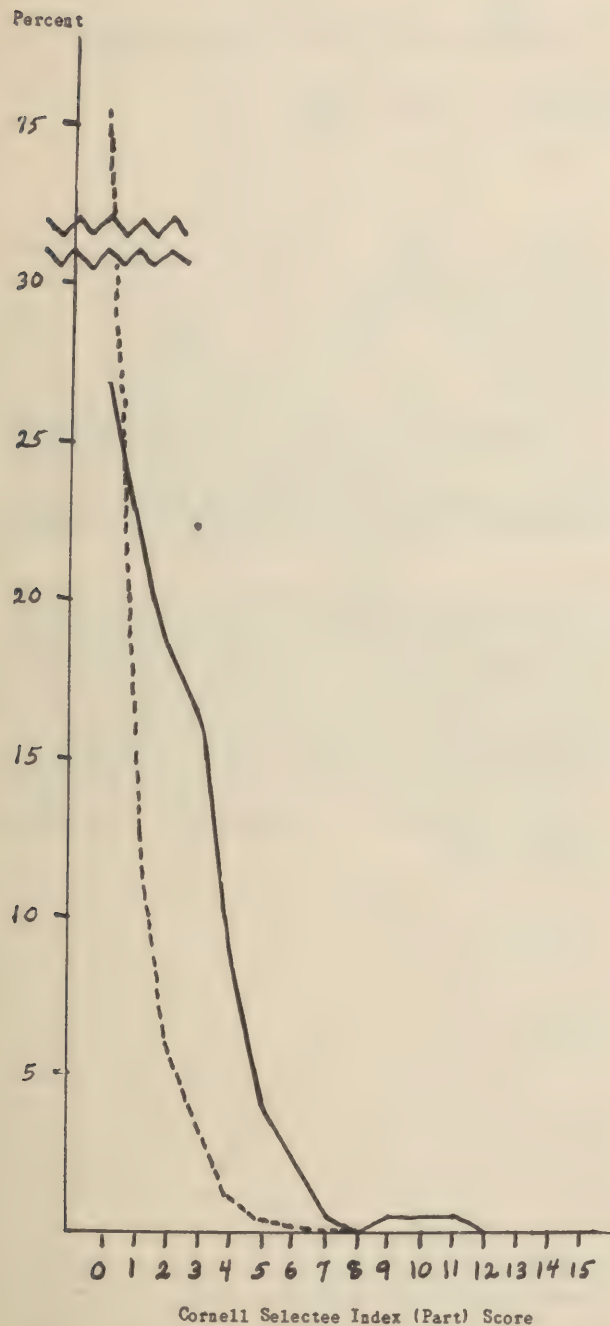


Figure 5.—Distribution of Cornell Selectee Index (stop) scores. Solid lines, men admitted to N. P. unit (206); broken lines, men never admitted to N. P. unit (1,936).

partially due to the all-or-none wording of some of the Index items, and to the apparent tendency for some of the items to lend themselves to habitual misinterpretation. For example, the man who had nonepileptic convulsions in infancy, the man who detected fleeting traces of blood in seasickness vomitus, the conscientious man who received three parking tickets, and the man who in haste does not notice the word "mental" preceding "hospital" on the test blank, consistently swell the "false positive" group because of their affirmative responses. It has been our practice because of this effect to control the testing situation as closely as possible, with the identical instructions, designed to minimize this tendency, given to each group.

Since many of the "noncritical" items of the Cornell Selectee Index have to do with anxiety and related symptoms, and since so many of the men in this study had been through dangerous and strenuous duty, it was considered advisable to determine the distribution of scores for the entire Cornell Selectee Index scale rather than for only those items originally regarded as significant. Figure 6 gives this distribution, and a marked differentiation is again apparent. Cumulative percentage analysis indicates that 80 percent of the admission group reached or exceeded a total score of 6 points as against 18 percent of the control group.

Because of the wide range in the percentages of the two groups responding significantly to the various items of the two tests it seemed advisable to make an item analysis with a view to identify those items offering the greater differentiating power. Accordingly, the frequencies of significant responses for all the items of both scales were subjected to Chi Square testing. It was found that the differences in the percentages giving "abnormal" responses between the admission group and the control group failed of significance at the 1 percent level in the case of 3 items only—No. 7 of the Personal Inventory, and Nos. 16 and 30 of the Selectee Index.

The most useful items are obviously those responded to significantly by a heavy proportion of the admitted group, and at the same time by relatively few of the control group. On the Personal Inventory scale 16 of the items received significant response from over 50 percent of the admission group. In all but 4 of these items the percentage of admitted cases responding significantly exceeded the corresponding percentage of significant responses in the control group at a ratio of 2 or greater to 1. The four items where this ration was smaller than 2 to 1 are items 1, 4, 14, and 17. The items where fewer than 50 percent of the admitted group responded significantly were Nos. 2, 5, 7 (where the difference between admissions and controls is not real), and 12. Except for No. 7, the ratio for

these items as between admissions and controls is better than 2 to 1. Thus, a revision of this scale eliminating the 8 items just mentioned would be expected to possess ample differentiating power.

In respect to the Cornell Selectee Index scale, the proportion of items satisfying the criterion of occurrence of significant responses in over 50 percent of the admission cases, and a minimal ratio of 2 to 1 frequency over the control group occurrence is smaller. Only 9 items meet this requirement. These are Nos. 1, 2, 6, 7, 8, 9, 19, 20, and 23. It is noted in passing that 7 of these items are among those items considered noncritical in the original standardization. Items 16 and 30 do not differentiate between the 2 groups. Of the remaining items the ratio in the direction of more frequent occurrence in the admission group is 2 to 1 or greater except in the case of No. 4. However, the percentage of occurrence in many of these items is small—less than 10 percent in 10 of them. Such items might economically be eliminated on the basis of infrequency, particularly in the light of the author's experience that the categorical nature of the significance of those items is open to question; otherwise they should be modified to enhance their categorical value. There is no question but that at the recruit level or induction level these items in question are of greater importance.

In summary, then, it has been the experience of the author that both the Personal Inventory and the Cornell Selectee Index, used as preliminary screening instruments to select men who should come to psychiatric attention, are valuable aids, particularly when time and personnel are limited, and that furthermore these tests show a differentiating power when used with the long-service group which is comparable to that found when dealing with men at the induction level. Of the two tests the Personal

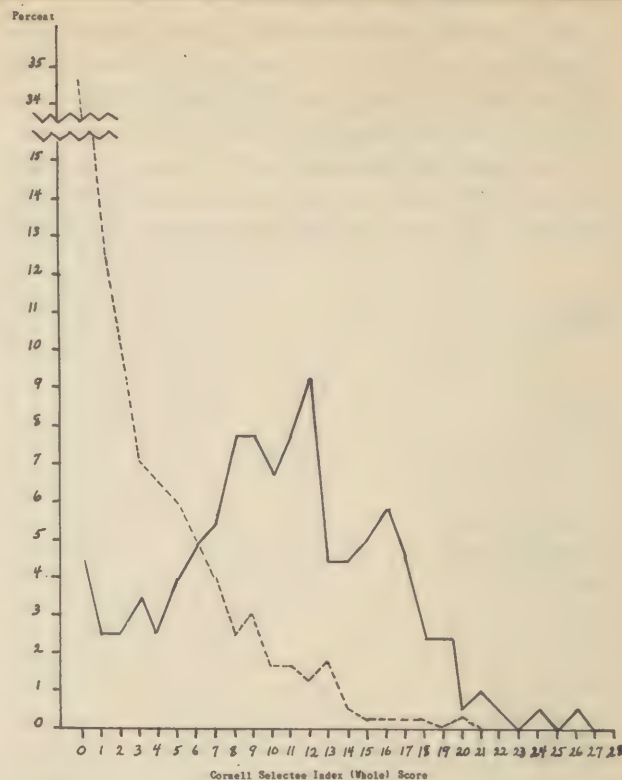


Figure 6.—Distribution of Cornell Selectee Index (whole) scores. Solid lines, men admitted to N. P. unit (206); broken lines, men never admitted to N. P. unit (490).

Inventory seems to offer better results. Its items are shown to contain a greater proportion of those with heavily selective power, and fewer "false positives" result from its use. Against these factors is one point where the Cornell Selectee Index has the advantage in that the Cornell Selectee Index samples a wider variety of symptom complexes, but the true occurrence of some of these at the long-service level is so rare as to make this advantage largely academic.

CHAPTER 15

MENTAL MECHANISMS AND MORALE FACTORS OF NAVAL RECRUITS IN TRAINING*

Morale has but one meaning for a military organization. It is the mental mechanism by which the consciously directed efforts of all the men succeed in attaining the goal of the organization; victory at the lowest cost in the shortest time. Anything which may thwart or hinder this effort is evidence of low morale. High morale is always accompanied by recognition of conscious effort on the part of the participant; knowledge that he is working toward the solving of a problem or the attainment of a goal.

Seldom does a man upon entering the military service have any understanding of his duties or responsibilities to his organization. He may have identified his participation with some vague purposes but he has not identified himself with any organized group or effort and has only scanty knowledge of what his participation is to be. This is particularly true in a nation where militarism is not an integral part of the individual's personality.

It is the primary concern of those charged with the orientation of men and the supervision of military personnel, to direct the thinking and actions of individuals toward practices and habits designed to accomplish morale by direction and integration. A group of men entering military service is composed of as many different personalities as there are members in the group. It cannot be too strongly emphasized that each man in the group is obsessed with his own particular points of view, his personal ambitions and his personal problems. For some, war is adventure; for others a chance to "get away from it all;" for still others there may be a pecuniary consideration. Some enter the service because of inevitability or sense of responsibility and shape their efforts toward creating or effecting their own particular niche in the

military picture. Others set up barriers against the unpleasant elements of their situation. A few, however, appear to be concerned with what they can personally do to attain victory at low cost. Despite popular opinion, many appear to be interested in a personal low cost with little regard for collective and aggregate low cost (both in lives and material).

The first step toward the attainment of "good" or "high" morale is the elimination of factors or conditions which cause low morale and the avoidance of situations which will reduce morale. It is the purpose of this chapter to discuss four factors which are believed to be primary causes of low morale.

The factors which contribute most to this condition may be grouped into four major categories: Disorganization; special privileges; uncertainty; and lack of purpose.

DISORGANIZATION: ITS INFLUENCE ON MORALE

Disorganization portends confusion and lack of definite purpose. Men like to know that the vehicle on which they are traveling is able to make the journey. Despite excellent intentions no man can feel sure of performance or of his ability to attain his goal, if he lacks faith in the structure of his organization.

Most men recognize disorganization or poor organization no matter how limited their own administrative abilities may be. The obvious solution to faulty organization is reorganization. It is not within the province of this paper to discuss methods of organization but rather to point out that lack of it is an important contributing factor in the destruction of morale.

SPECIAL PRIVILEGES AS EFFECTORS OF LOW MORALE

The fundamental principle of American philosophy is equal opportunity. This is a principle which has carried

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over into our military organizations. It carries with it the assurance that each man has the same opportunity and is subject to the same discipline. This is a right which a man does not relinquish upon entry into service. He expects equal opportunity for advancement, an equal right to present his problems to his superiors, an assignment of duty in keeping with his qualifications, and equitable punishments.

The morale difficulties which arise from special privileges have two primary sources, i.e., (1) consciously granted special privileges, and (2) special privileges resulting from a concatenation of circumstances. The former must obviously be avoided. Men quickly distinguish unusual liberality to favored individuals or groups and the reaction is one of justifiable resentment.

The unconscious granting of special privileges by a fortuitous combination of events is much more dangerous and less likely to be recognized as such. For example, ill considered liberties, hasty recommendations for promotion, and impromptu judgments create the illusion of inequality. All set the fortunate individual apart and effect serious damage to the morale of the others. The man who finds himself convicted by his superior before presenting his case is also the victim of unconscious special privilege.

The very nature of men is a complicating factor which adds difficulty to this problem of equal opportunity. Some are retiring and others are aggressively ambitious. It is as necessary to insure that the first group have equal opportunities presented to them, as it is to temper the overambitious personality.

UNCERTAINTY: MORALE REQUIRES A FACTUAL BASIS

The daily experience of practicing psychiatrists bears out the old adage "the worst fears are the fears of the unknown." If the converse is true, effort expended in the elimination of factors which produce uncertainty will do much to increase the morale of the individual members of any unit. As a result of our observations a number of causes of uncertainty were noted. Since the direct ques-

tionnaire method of determining relative frequency and order of importance of such causes is not feasible in a military organization, the factors are simply listed below.

1. Inadequate understanding of the relationship of the man to his unit.
2. Insufficient knowledge of duties, responsibilities, opportunities and penalties.
3. Ignorance of the general military purpose of his group.
4. Inequalities of pay or promotion.
5. Lack of communication with family and friends.
6. Concern over creature comforts.
7. Rejection of the individual by other members of his group.

LACK OF PURPOSE: MORALE IMPLIES A PURPOSIVE BEHAVIOR

A definite purpose or objective, clearly understood by all, is one of the greatest factors in morale. These objectives of an organization are of two types; immediate and long range. A unit may function for a period of time with only the long-range type, i.e., "we are out to win this war;" but the sense of accomplishment following the completion of scheduled work is a requisite for continued high morale. It has been observed in this study that a concrete attainment is far more gratifying than routine progress toward the goal ideal.

CONCLUSIONS

Unfortunately, the problems presented here do not lend themselves to specific solutions or methods of treatment. They are instead "red-flag" warnings for responsible officers, things to be avoided. The existence of these problems reflects an unhealthy morale situation. It is the problem of each officer to determine when these problems arise (better still to assure that they never do arise), analyze the situation and determine the proper solution based on the facts disclosed.

It should not be forgotten that in wartime the majority of personnel have no military interests beyond winning the war; that as a group they cannot be expected after so brief a period of indoctrination, to be other than a "civilian navy."

SECTION III

CONDITIONS IN ACTIVE SERVICE

CHAPTER 16

NEUROPSYCHIATRIC PROBLEMS ON A BATTLESHIP*

This chapter is a review of some of the problems of neuropsychiatric disease, as encountered aboard a battleship which has been overseas and engaged in operations against the enemy for 31 months, and of the efforts of the medical department to cope with it. It is based on a study of over 100 cases. It is felt that a description of the nature of the diseases encountered and the results of our efforts to treat them may be of value to medical officers assigned to shipboard duty as well as to hospital personnel to whom such cases are referred.

NATURE OF THE NEUROPSYCHIATRIC DISEASES ENCOUNTERED

It became apparent to the present medical officers, soon after they came aboard this ship, that one of the major medical problems with which they were faced was that of dealing with a large number of men who came to sick call repeatedly with a plethora of complaints, for which no "organic" cause could be found, and for which no medical treatment seemed to avail. A record was kept on each of these men. Each was seen by a medical officer on several occasions. A thorough history was taken on him, and a physical examination was done. Various laboratory tests were performed in cases in which they seemed indicated, to the limit of the capabilities of a ship of this type. Some men were sent to hospitals or hospital ships for consultations on doubtful points. Others were kept in the sick bay for observation or treatment, as indicated. In this manner a large number of cases were investigated. Because we have kept a file card on every man who came to sick call, we know that during the past 18 months we have seen fully 80 percent of the crew at one time or another, and that nearly all of the men aboard who had neuropsychiatric complaints have been studied.

It became evident to us that in nearly all of our patients we were dealing with what is basically a single syndrome, with variations on the theme. It was easily diagnosed in

most cases, and the diagnosis made upon a "positive" basis, and not by exclusion. It was, in our opinion, essentially an "anxiety syndrome" and substantially the same as that which was called the "effort syndrome" in World War I. (1).

These patients, as they appear in the sick-call line, have a characteristic "sad and worried look." They seem tired, dejected, and at the same time suspicious, and anxious to convince the doctor of the reality of their symptoms. Their presenting complaint may be any one of several: Epigastric distress and nausea, restlessness and nervousness, pain around the heart, recurrent headache, or chronic fatigue. Sometimes they present themselves with a clearly hysterical paralysis, or with symptoms referred to an actual organic illness of a minor nature—classically "flat feet" or "backache."

Regardless of the initial complaint, careful questioning and a system review will reveal that all of them also have either all or several of the following symptoms, which are here enumerated:

Headache is very common, and seen in nearly all of these men. It may have any form: Constricting, squeezing, temporal, frontal, occipital, "like a pressure right here," or a mixture of several forms. Localizing signs suggestive of intracranial disease are absent, although the patient often attributes it to his "sinuses" or his "constipation." It is recurrent, and usually has been present since childhood.

Precordial or presternal pain is very common also. It is described as "sticking" or "constricting," and is usually localized just over the apex of the heart. It is not severe, but it is recurrent and alarming. Sometimes it is described as "all over the left side." It almost never radiates in the manner of angina pectoris, and it is never related to exercise—in fact, exercise often will abolish it. Patients often complain of a "feeling of gas around the heart." In addition, they frequently say they have "pound-

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ing of the heart," which is generally noticed after slight exertion, but classically occurs just after they have gone to bed. When a man says, "Doc, I can't go to sleep because my heart pounds, and I can't lie on my left side at night because it bothers me so," the complaint is almost pathognomonic.

These people have frequent *sighing respirations*. They often find it *difficult to breathe* (especially in closed, warm spaces) and say that they "can't take a deep breath." They also complain of *dizzy spells* when they arise suddenly from a sitting or lying position. *Fainting* is not uncommon among them.

Probably the most common single initial complaint of our patients is *epigastric distress* in some form. Usually it is described as a "burning" or "gripping" pain, located in mid-epigastrium, and usually, but not always, postprandial in occurrence. Sometimes it is relieved by food and soda, and often it is accompanied by sour eructations and heart-burn, so that only an x-ray can establish the absence of a peptic ulcer. On the other hand, it is so often accompanied by *morning nausea*, dislike for the sight of food, a *poor appetite*, and intolerance for unusual foods (asparagus or pineapple juice, for example) that the differentiation may be suspected from the first. In addition to the gastric symptoms, *spastic constipation* is not uncommon, and a "lump in the throat" is occasionally complained of.

Urinary symptoms are not common, but occasionally one sees a man who complains that he has to get up several times at night to urinate, or that he has to do so frequently in the daytime. Questioning will reveal that he passes only a small amount of clear urine each time, that there are no other urinary symptoms, and that there is no history of urinary disease. The urine is normal on examination.

Almost without exception these patients *sleep poorly*. They say that it "takes at least an hour to get to sleep." They are often night-owls, who stay up until very late because they are "not sleepy." Usually they sleep lightly, but not always. Often they complain of *nightmares* or weird dreams. Almost universally they have *morning fatigue*. It is very rare to find one who does not say that he is "tired" when he wakes up. When a man complains that he is "tired when I get up than when I go to bed," one can almost make the diagnosis forthwith. This morning fatigue is often accompanied by a feeling of weakness, which wears off during the day, leaving the patient feeling all right in the afternoon.

In the daytime these people are restless, and often irritable and excitable. They "can't sit still." Frequently they cannot tolerate crowds or closed spaces.

A small or finicky appetite is common among them, and it is very rare that one is found aboard this ship who does not *smoke excessively* and drink large amounts of *coffee*. It is not unusual to find a man who drinks 20 large mugs of coffee each day, and smokes 2 packs of cigarettes.

The *physical examination* correlates well with the history. It reveals an unhappy and worried man, with a generally hyperactive autonomic nervous system. A sad face is so usual among patients of this sort that the hospital corpsmen have nicknamed them the "long-faced men." There is a fine tremor of the outstretched hands; the palms are moist and clammy; there is axillary sweating, even in a cold room; the pulse may be very rapid, but usually it is about 80 or 90, and of small volume. Sighing respirations may be seen. Epigastric tenderness often appears in those who complain of epigastric pain, and a spastic colon can be palpated in some who have spastic constipation. Hyperactive deep reflexes appear about half of the time.

The widespread notion that people with symptoms of this type have an "asthenic" body build has proved in our cases to be entirely erroneous. It is true that there are many of them who are tall, thin, and slack-muscled; but the fat, the chubby, and the robust are just as common as the thin.

The *past history* and the *family history* are almost without exception significant. They will be discussed at greater extent later. Suffice it to say here that it is rare to find a patient with this syndrome who does not give a past history of various prodromal nervous stigmata in childhood, and who does not give a family history of having had one or both parents with similar symptoms, and of having been raised in a disrupted home in which parental love and guidance were lacking; and there is hardly one of them in whom some deep seated conflict or insecurity cannot be discovered.

There can be no doubt that we are dealing with a true psychosomatic syndrome. *Laboratory tests* confirm what the history and physical examination suggest. In the patients with "epigastric distress" a high gastric acidity often can be demonstrated. The very anxious ones sometimes run an afternoon temperature of 99.4 to 99.8 as they lie in bed in sick bay (2). Those with circulatory symptoms show poorly compensating cardio-vascular systems, with persistent tachycardia after slight exercise; others, paradoxically, show a fall in pulse-rate several minutes after exercise. Those who smoke excessively sometimes have ventricular extrasystoles. A physician who persists in seeking an "organic cause" (in the usual sense of the word) for the complaints of these patients will find

enough "red herrings" to keep him busy and suspicious for months.

The diagnosis is always made upon a positive basis, not upon a single symptom, but upon the presence of the whole syndrome. It can almost be said that regardless of the type of psychoneurosis present this syndrome can be found in whole or in part. An unhappy and irritable man is seen. He has one of the common presenting symptoms, such as epigastric distress. The history shows that he has been restless also, that he sleeps poorly, awakens tired, has headaches, is constipated, and smokes heavily. He is sweating in his axillae, and there is a fine tremor of his outstretched fingers. He has "always been a little nervous." He was a shy child. His mother had a nervous breakdown. Physical examination and laboratory tests are as previously described. Such is the usual patient.

The knowledge of the significance of this syndrome has greatly facilitated the diagnosis of many cases. "Pain in the leg" after an alleged "fall," can be suspected of being hysterical from the very first, if this syndrome is present. A few days of observation and neurological tests will usually rule out ruptured intervertebral disc and other organic lesions. "Backache" or "flat feet" to which intolerable—and intractable—symptoms are referred, can be recognized as a "fixation" symptom, if the anxiety syndrome is also present. Even though there is a slight functional scoliosis, or moderate pronation of the feet, it can be recognized from the first that psychiatric as well as physical treatment will be necessary to effect a cure.

Of course, one must never forget the true "organic diseases" which the syndrome simulates. Hyperthyroidism and peptic ulcer must always be considered, and ruled out. Perhaps these diseases differ from this syndrome more by degree than by nature, and develop from it. Organic heart disease must be sought for and suspected. Intracranial neoplasm and chronic sinusitis may be present in those with headache or they may have migraine, or any one of the many other causes of headache. And of course there is nothing to prevent a patient with the anxiety syndrome from having an "organic disease" also. However, if the nature of the syndrome and its specificity is recognized from the first, many fruitless laboratory procedures are avoided. There are probably a very great many men in the Navy who are receiving prostatic massages, wearing orthopedic shoes, or undergoing extensive x-ray studies, who could be helped more by firm but kindly explanation of the nature of their symptoms, and an attempt to help them adjust to Navy life.

Actually, this anxiety syndrome is only the somatic expression of a psychic disorder. In every case the history reveals the patient to have had either some pre-existing evidence of psychic instability, or a profound and recent

psychic trauma (such as the sudden revelation of a wife's infidelity). However, we have resisted the temptation to hang the label "psychoneurotic" on these men, despite the fact that if we had to admit them to the sick list, perhaps 95 percent of them might be so diagnosed. Most of them were outwardly well adjusted in civil life; nearly all of them, as we shall show, have made adequate sailors. Although their symptoms may be regarded as "psychoneurotic," their illness is usually not profound enough to warrant the diagnosis "psychoneurosis." Nor do they have true "operational fatigue," as we shall show also. We have found it to be a grave therapeutic mistake, in most cases, to give a man either of these diagnoses and admit him to the sick list. It only convinces him that he is a "sick man." It gives him a peg to hang his hat on.

Most of these patients have simple anxiety states, which are amenable to ambulatory shipboard treatment.

NATURE OF THE SERVICE TO WHICH THESE MEN WERE EXPOSED

The men in whom these diseases appeared were members of the crew of a ship which has been overseas for 31 months. It has taken part in 11 Pacific campaigns, 7 shore bombardments, and 1 major fleet action. It has been under air attack perhaps half a hundred times. During nearly all of this period it has been operating in tropical waters. It has been hot and crowded. Its crew has stood a "watch in three" for months on end. Cruises of up to 6 weeks duration have been broken only by a brief stay in some bleak Pacific atoll, during which ammunition loading and repairs were constantly under way. A man who has been aboard for the full 934 days of operation will have had a total of 914 hours, or 38 days, available for recreation off the ship (on some small tropical sandpit on which recreation consists of a swim and 3 cans of warm beer) and 21 days' leave in the United States.

For all this, the service aboard a ship of this type is comfortable compared to that aboard most other vessels. Creature comforts—warm food, a varied diet, ice cream, moving pictures, laundry service—are never lacking. "Safety" is as great as can be found upon a combatant ship. Utter boredom and chronic fatigue, however, these men share with all other men at war, and in no less measure.

Are these men suffering from operational fatigue?

In 98 percent of our cases, the symptoms were found to be "service aggravated"—that is, they are worse now than they were when the individual came into the service.

On the other hand, in what sort of people have these symptoms appeared? In 87.3 percent of our cases there was a past history of neuropsychiatric symptoms before entry into the service. Either they had their present symptoms in

a milder form (most of them did), or they showed those childhood and youthful stigmata which are generally agreed to predispose to neuropsychiatric disease: Excessive shyness, night terrors, sleepwalking, bedwetting, inability to adjust to school, a high truancy or juvenile delinquency record, running away from home, changing from job to job without sufficient cause, and so on; most of them had the childhood stigmata, and their present symptoms as well, before their induction. In addition, 86.3 percent of them had a family history conducive to neuropsychiatric disease, in the sense that it showed one or more of the following: One or both parents who were extremely nervous or had a "nervous breakdown"; a home broken by divorce, infidelity, the early death of a parent, alcoholism, or some similar cause; or the absence of parental supervision and affection for the child. In 78.4 percent of the cases both the family history and the past history were positive. Only 5.9 percent of the cases were negative in both respects; about half of these were considered "reactive depressions," and the remainder consisted of boastful, resentful, and un-cooperative individuals who are suspected of concealing a part of their history.

Neuropsychiatric disease on this ship has appeared almost entirely among the predisposed.

TABLE 22.—Incidence of neuropsychiatric disease

Total time overseas	Percent of patients	Percent of crew
31 months or more ¹	38.6	35
17 to 31 months.....	12	20.1
Less than 17 months.....	49.4	44.9

¹The incidence is just as high among those who have been aboard less than 5 months.

Prolonged duty of this type *per se* does not appear to cause neuropsychiatric disease. The incidence of neuropsychiatric disease is shown in table 22. It can be seen that neuropsychiatric disease is no more common among those who have been aboard 31 months, than among those who have come aboard recently.

An investigation of the histories of our patients shows that the causes of their anxiety were these, named in the order of their importance: (1) Anxiety over the family situation at home; (2) sexual (i. e. "love") conflicts; (3) inability to adjust to the shipboard routine and to "get along" with their shipmates and petty officers; and (4) worries about personal health. Not over 5 percent admitted to any anxiety over their own safety, although perhaps 25 percent admitted having nightmares about the ship sinking, etc.

It is not permissible to give figures for patients hospitalized, but it can be said that of those patients sent to

the hospital from this ship during the past 18 months for neuropsychiatric disease, only one showed a negative past history, and had clearly been through enough strenuous action (on another ship) to warrant the belief that the symptoms had developed *de novo* since entry into the service.

A careful evaluation of all of our cases by rate and division showed only one type of duty aboard this ship which might be conducive to true "operational fatigue"—that of radioman. The incidence of anxiety states among these men was about twice as high as among the rest of the crew. Positive family histories were present, but not as striking as in most other cases. There is no doubt that the work of the radiomen is gruelling. They stand one 8 hour watch in three, guarding the circuits. During these watches they spend alternate hours copying code at a rapid rate, a job which requires the utmost speed and concentration, and the remainder of the time transcribing what they have taken down, another job requiring great attention to detail, although it is regarded as a "rest" from taking code. Their work goes on in port just as it does at sea; sometimes it is heavier in port. It continues Sundays and holidays without a break. A high degree of nervous fatigue develops among the operators, and even those who are not susceptible to the development of anxiety states become stale and tired.

TREATMENT USED, AND RESULTS OBTAINED

The treatment of these cases has been of the simplest sort. The medical department of this ship does not include a specialist in psychiatry, and no complex psychiatric therapy was attempted. We tried merely to enable these men to carry on and to be effective sailors, and to prevent their illness from reaching proportions which would require hospitalization.

By the time each man had told his whole history, including the nearly always significant family and past history, the nature of his symptoms was usually suspected by him. The first move was to explain his condition to him and the causes of it. If necessary, several discussions were held with him. He was told that his symptoms were annoying, but that they were common to his condition, and would not hurt him. It was impressed upon him from the very first that he was not really "sick," and he was assured that he would be *treated aboard this ship, and that he would get better as time went on*. Such family problems and financial difficulties as could be alleviated by arrangement with the chaplain and various relief agencies at home were so attacked, and conflicts within the man's division were ironed out where it seemed wise to do so.

However, these people are of such nature that if one of their problems is removed they will usually find another

to worry about, and the result of this line of treatment has not been gratifying in most cases. Their main conflict is with military life, and cannot be removed if they are to be retained in the service.

Further therapy to the patient himself was on physiological lines. Men who were acutely upset and "jittery" were admitted to the sick bay for several days and sedated with barbiturates until they had "cooled off." It was explained to them that cigarettes and coffee only increased their "nervous tension," and they were given stern orders to "cut it out." Of course, very few of them actually stopped smoking, but most of them gave up the coffee and cut down the cigarette consumption materially, to their great benefit. They were also told of the necessity of getting some form of relaxation in the afternoon, preferably physical exercise, to "take the steam off" and make them sleep better. They were urged again and again to exercise, no matter how "tired" they felt. If they had been shore based, instead of being aboard ship where it is difficult to obtain exercise in any form, doubtless we would have had better results with them. As it turned out, those who actually did exercise found that the increased "physical fitness" of their cardiovascular system greatly decreased their distressing pounding of the heart and extrasystoles, and "improved their wind"; they were more physically tired at bedtime, slept more soundly, and awoke less fatigued.

Unless the case proved intractable to all other forms of therapy, we attempted to avoid the use of medications. The reduced consumption of coffee and cigarettes, the avoidance of the most highly seasoned foods, and increased rest and exercise, went a long way to abolishing "epigastric distress"; the symptoms which remained usually responded to one or two "soda mint" (flavored sodium-bicarbonate) tablets after meals. The constipated were not given laxatives; they were told that it would not hurt them if they had a bowel movement only once in 2 days, and it did not. Every effort was made to prevent them from worrying about their health. They were always encouraged to stop worrying about having an ulcer, and "let the doctor worry about it." Only occasionally were men given phenobarbital. It was found that sedation, except for men confined to the sick bay, was unsatisfactory.

From the point of view of enabling these men to "carry on" and become adequate sailors, our results have been eminently satisfactory. Only 5.4 percent of our patients have received quarterly marks for proficiency in rate which were below 3.0. Ninety-five percent of them received grades above 3.5 in conduct, and 81.6 percent of them were marked 4.0. The number of courts-martial and captain's masts awarded them was no higher than those which would usually be awarded to a random sample of the crew.

On the other hand, they might still be labeled "psycho-neurotics" if we wished to do so. Their basic nature is unchanged, and unfortunately, their symptoms often persist; but most of them have developed insight into their condition, and have adjusted their conscious thoughts, at least, to staying out here and "getting on with the war."

The following tables indicate the response of our patients to treatment, with respect to insight and alleviation of symptoms:

TABLE 23.—*Insight and conscious adjustment to "carrying on"*

Degree of insight	Percent of patients
None.....	5.8
50 percent or less.....	15.1
50 percent to 90 percent.....	32.6
90 percent or more.....	46.5

TABLE 24.—*Alleviation of outward symptoms*

Degree of alleviation	Percent of patients
Symptoms worse.....	3.5
Not improved.....	18.6
25 percent improved.....	24.4
50 percent improved.....	25.6
75 percent improved.....	16.3
90 percent improved.....	11.6

We are particularly impressed by the improvement made by our patients with hysterical "paralyses" and paresthesias. We have seen 13 of them. One was hospitalized. The remaining 12 are still aboard, every one of them has recovered entirely from his hysterical symptoms, and has remained free of them over observation periods of up to a year.

CONCLUSIONS

1. Regardless of the neuropsychiatric names by which it may be called, the neuropsychiatric disease seen aboard this ship is largely in the form of a psychosomatic anxiety syndrome, and it is not of a severe nature. It can be diagnosed on a positive basis from the history and physical examination.

2. The vast majority of the neuropsychiatric problems which are present aboard this ship have appeared only in men who can be shown to have had neuropsychiatric symptoms previous to their induction.

3. Except in the case of radiomen, there is no evidence that the neuropsychiatric disease which has developed aboard this ship has been caused by the strenuous nature of the duty to which the men have been subjected. The provoking cause is the removal of a susceptible individual

from his civilian environment and his introduction into a new environment to which he must adjust.

4. Proficiency, conduct, and punishment records on neuropsychiatric patients show that these men, as treated aboard this ship, have made satisfactory sailors. In this connection, however, it must be admitted that this ship has never had to face the ordeal of suffering heavy casualties, and the performance of these men under such circumstances has not been tested. They have performed well in many air attacks, some of which were pressed home

with vigor. Less than 15 percent of those which we have attempted to treat have had to be hospitalized because of failure.

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CHAPTER 17

NEUROPSYCHIATRIC EXPERIENCES IN ADVANCE BASE UNIT¹

Follow-up information in doubtful neuropsychiatric cases and evaluation of the results of "screening" procedures for naval recruits are obtained with difficulty. A unique opportunity, however, to examine a group of men from the neuropsychiatric standpoint, to live with them, and to observe their subsequent course, resulted in calling attention to some psychiatric errors and pointed the way to more efficient detection and disposal of the psychiatrically unfit.

The experiences constituting the subject matter of this chapter occurred while serving with an advance base unit during its organization, transportation overseas, and staging period at the advance area.

The group composing the unit was organized at a training center in the United States for the purpose of training for duty and transportation to an overseas base. The unit consisted mostly of technician ratings who were specialists in the various activities pertinent to an advance base.

Upon completion of the training period, the unit was shipped overseas to a staging area, where it remained several months. At this area many ratings were employed in various activities about the base. Of necessity much of the work was unrelated to the specialties in which the men were rated.

Finally the unit left this area and moved forward to establish its own advance base. When this had been done the original unit was formally dissolved, and the personnel remained as base personnel.

The following observations were made over the 9-month period in which the unit was in commission.

Procedures at the training center.—At the training

center in the United States, each man assigned to the unit was given a physical and neuropsychiatric examination to determine his fitness for overseas duty. Notes were taken of the findings and of the impressions of the psychiatrist and these were filed for future reference. Thus when a patient was referred for consultation later on, it was possible to obtain the file and compare original impressions with those obtained at consultation. The advantages of keeping this file were obvious; it served as a valuable check on patients' later statements of having had complaints of long standing, such as headache, enuresis, and "nervous trouble," and enabled the psychiatrist to observe his own sources of error.

The type of examination given was a brief (3 to 5 minutes) "screening" examination modeled on that developed by Wittson and his coworkers² at the United States Naval Training Station, Newport, Rhode Island. This was supplemented by return visits of persons whose fitness was doubtful. As much time as necessary was allotted to these return visits. As a result of this procedure, every patient examined was placed in one of the three following categories: (1) Rejected and transferred to a U. S. Naval Hospital; (2) accepted for overseas duty with a notation of "doubtful" on his file card, with findings; and (3) accepted for overseas duty with negative neuropsychiatric findings. Accordingly these three groups are referred to as "rejected," "doubtful," and "negative."

The following information was obtained in the "screening" examination: Name, rate, age, social status, married or single, church, years in school, history of headaches, dizzy or "faint" spells, convulsions, "nervous trouble," enuresis, somnambulism, stutter, arrests, alcoholism, head injuries, and serious physical illnesses, kind and duration of last civilian employment, presence of psychotic, psychoneurotic or "psychopathic" manifestation, and neuropathologic conditions.

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²Wittson, C. L.; Harris, H. I.; and Hunt, W. A.: Detection of neuropsychiatrically unfit. U. S. Nav. M. Bull. 40: 340-346, April 1942.

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

TABLE 25.—*Distribution and disposal at training center*

Original category	No. examined	Percentage referred for consultation	Percentage to duty after consultation	Percentage transferred
Negative.....	964	3.52	2.38	1.14
Doubtful.....	84	21.4	17.84	3.57
Rejected.....	30			100

During return visits of "doubtful" patients, any suggestion of neurologic or psychiatric tendencies obtained in the first interview was amplified and investigated.

Prophylactic procedures.—It was thought that the long voyage overseas, with its delays at anchor in various ports and the resulting inactivity, would provide a considerable morale problem and a strain on the unstable. This proved to be correct. In order to combat this condition, lectures were given to groups, mostly hospital corpsmen, on morale and its promotion. The points stressed were the desirability of the following: (1) Understanding and discussion of war aims; (2) awareness of the universality of fear in appropriate situations and of minor manifestations of "nervousness"; (3) cultivation of social insight and judgment; (4) a frank recognition and discussion of the problems of adjustment to discipline, to periods of inactivity, to crowding, to the uncertainties of the future, and to physical discomfort; (5) the cultivation of all possible extracurricular activities or "hobbies"; (6) the acquisition of knowledge of one's environment and of facility in making specific adaptations to it.

In addition informal talks on subjects of general interest, designed to provide information and stimulate thought on "hobbies," world affairs, and the prospective environment, were given.

The result of these talks was difficult to evaluate, but many contacts with the men led to the belief that they were of considerable prophylactic value.

Consultation procedures.—On board ship, and at the staging area, medical officers were made aware of the facilities for neuropsychiatric consultation. Information concerning complaints and their immediate history was solicited from medical officers, divisional officers, and from shipmates of the men who were referred for consultation study. Upon request psychiatric examination was

conducted according to standard practice, and the findings recorded. Finally reference was made to the patient's file card, and recommendations relative to disposition were communicated to the senior medical officer.

Treatment.—Treatment facilities were limited because of the lack of facilities for hospitalization and observation, the large case load from referrals, and the impossibility of establishing any routine times or places for treatment interviews.

Reassurance and constructive advice, or recommendation for transfer to a hospital was all that could be done in most cases. In some instances, however, more extended and repeated therapeutic interviews were carried on, aimed at emotional catharsis and the promotion of superficial insight. Deep psychotherapy was out of the question because of the short time available and the impossibility of any regularity or system.

Every man not transferred had to be considered satisfactory for duty within a few days. As a systematic therapeutic program of any magnitude could not be followed, a few patients were carried along with infrequent casual interviews, but the majority could be seen only two or three times.

Treatment of chronic borderline neurotics and unstable personalities consequently proved unsatisfactory under the circumstances. It is doubtful whether treatment of the chronic unstable and unfit can ever be adequate at advance bases—a potent reason for making every possible effort to "screen" these persons before they leave the continental United States. It is true that about two-thirds of the referral patients were handled successfully without the necessity of transfer. But these were mostly mild, acute, reactive types, easily yielding to simple measures. It is believed, however, that more would have had to be transferred had no therapy been available.

TABLE 26.—*Marital status*

	Percentage of whole group	Percentage of training-center transfers	Percentage of referrals returned to duty	Percentage of referrals transferred	Percentage of total psychopathology seen
Married.....	28.3	44.8	55.2	50	50
Single.....	71.7	55.2	44.8	50	50

TABLE 27.—Age distribution

Age	Percentage of whole group	Percentage of training-center transfers	Percentage of referrals returned to duty	Percentage of referrals transferred	Percentage of total psychopathology seen
17-26.....	77.4	65.5	57.9	78.5	67.3
27-36.....	18.8	24.1	31.6	14.4	23.4 —
37-46.....	3.7	10.4	10.5	7.1	9.3 —
47-56.....	0.1				

The figures shown in table 25 indicate that about two-thirds of all those men who had to be taken out of the unit for neuropsychiatric reasons within 9 months, were rejected at the training center. They also show that neuropsychiatric referrals were about seven times as frequent and transfers about three times as frequent among the "doubtfuls" as among the "negatives."

The marital status of the examinees is seen in table 26; figures representing the percentage of married or single in the group indicated are given.

These figures show that the proportion of neuropsychiatric patients who were married was greatly in excess of the proportion of married men in the whole population. The age distribution is seen in table 27.

These figures indicate that the proportion of 17- to 26-year-olds in the total psychopathology group seen was less than their proportion in the whole population; the reverse was true of the 37- to 46-year-olds.

Table 28 shows the diagnoses among the group "rejected" at the training center.

TABLE 28.—Conditions causing rejection at training center

Dementia praecox.....	1
Psychoneuroses.....	7
Constitutional psychopathic states.....	15
Posttraumatic personality disorders.....	4
Epilepsy.....	1
Enuresis.....	1
Stuttering.....	1
Total.....	30

The diagnoses of those patients transferred after shipping out are listed in table 29.

Tables 28 and 29 show the relative preponderance of various types of personality disorders (constitutional psychopathic states) as disabling psychiatric disabilities. Among the schizophrenics, two-thirds were completely missed at the examination for overseas service, a fact which suggests extreme difficulty in detecting them before regression sets in and the need for special care in the examination of "schizoid personalities."

TABLE 29.—Conditions causing rejection after leaving States

Diagnosis	Original category	
	"Doubtful"	"Negative"
Dementia praecox.....	1	4
Psychoneuroses.....	0	1
Constitutional psychopathic states.....	1	3
Posttraumatic personality disorders.....	0	3
Psychosomatic problems.....	1	0
Totals.....	3	11

Table 30 shows the diagnoses among those returned to duty after overseas referral for consultation.

TABLE 30.—Conditions causing referral after leaving States

Diagnosis	Original category	
	"Doubtful"	"Negative"
Psychoneuroses.....	1	3
Constitutional psychopathic states.....	9	11
Psychosomatic problems.....	1	0
Migraine.....	2	1
Posttraumatic personality disorders.....	1	0
Malingering.....	0	1
"Nonpsychiatric".....	1	7
Totals.....	15	23

From tables 26 to 30 it will be seen that of a total of 52 men who were referred for consultation after being shipped out, 8 were "nonpsychiatric," 1 was a malingeringer, 14 were transferred, and 29 were returned to duty after simple therapeutic procedures. In other words, about two-thirds of the psychopathology found could be successfully treated by the simple methods described.

The patient with enuresis who was rejected at the training center was likewise found inadequate, immature, and unstable.

The case of "stuttering" rejection was so severe that the individual, at times of stress, could not, for minutes at a time, make himself understood.

Only four inverters came to the attention of the psychiatrist. One had been classified as "doubtful" in the United States; he adjusted after superficial therapy. Three had been undetected at the training center; one of these had to be transferred in an anxiety state, and two adjusted after superficial therapy. It is not to be supposed that the three who adjusted were "cured," but rather that they adapted to their situation, carried on with reasonable efficiency, and caused no trouble.

One of the men with posttraumatic personality disorders transferred after shipping out had received a head injury at the training center 10 days before leaving. He was without symptoms when he was shipped out.

One "doubtful" patient was transferred, with the diagnosis of constitutional psychopathic state, after leaving the United States. He displayed considerable anxiety and was inadequate. He was returned to duty from an overseas base hospital, the only one in the series so returned, just as the unit was dissolved. By the time he rejoined the unit his condition was exactly the same as before his transfer.

The patients listed as "nonpsychiatric" were mostly disciplinary problems, whose behavior could not be established as psychopathologic, and who were reported to the referring officer as "administrative problems," as also were most of those with a diagnosis of constitutional psychopathic state.

COMMENT

In discussing the findings it is necessary to bear in mind the history of the unit; it was never at any time a front-line combat echelon and consequently the conditions reported had no relation to combat fatigue or combat trauma. On the other hand there was always the possibility of submarine or air attack, and there were long periods of inactivity, or of routine labor mostly unrelated to the specialized training of the persons involved.

Disregarding details concerning causative factors, and pending a thorough review of the case histories, it is possible to assign major importance to the following conditions: Constitutional predisposition; preexisting psychopathologic behavior patterns; separation from former relationships of emotional dependence; unstable business and

domestic affairs at home; inadequate appreciation and understanding of war aims and of the mission and outlook of this particular unit; inadequate resources in the individual for sublimation, such as hobbies or study; an environment involving considerable physical discomfort; unconscious homosexual tensions arising from the protracted and inescapable intimacies in an exclusively male social body; and a general lack of social insight and judgment.

In view of the opinion frequently expressed that heterosexual deprivation, as such, is often of etiologic significance, it is interesting to note that this did not appear as a causal factor in any case observed. Moreover the majority of these men had not even spoken to a woman in 9 months.

Certainly the most productive means of attack on psychiatric disease in this type of unit is prophylaxis, both by adequate "screening" before shipping out and by efforts to minimize or forestall the effects of the aforementioned factors.

Regarding screening, there is one hazard which must be pointed out. Not infrequently division officers and others in authority over the men will protest against the medical officer's recommendation for rejection of a certain person, alleging that he is indispensable to the unit, or that "the Navy will make a man of him," or the like. Errors of this type have convinced the writer that better results are to be expected when reliance is placed upon expert rather than lay judgment. Once chronic psychopathosis of any magnitude appears, treatment at any activity short of a psychiatric hospital in the continental United States is useless. These people simply cannot adapt themselves to the exigencies of this kind of situation, and their presence as psychiatric cripples contributes to the instability and inefficiency of the entire unit. There is no prospect that treatment overseas will enable them to "pull their own weight." This opinion, however, does not apply to the acute neuroses of war. Persons with superficial, minor complaints that can be dealt with by reassurance and catharsis in a few interviews can be benefited considerably.

CHAPTER 18

PSYCHIATRIC PREPARATIONS FOR COMBAT IN A MARINE DIVISION*

The psychiatric measures undertaken in preparation for combat, in a Marine Corps division during its last months of training in the final staging area, are most important. The objectives sought in the work done on a tropical island just south of the equator in the Southwest Pacific were: (1) The elimination of the psychiatric unfit; (2) the promotion of mental health; (3) the inauguration of preventive psychiatric measures in actual combat; and (4) the preparation for the care of psychiatric casualties in the field.

Elimination of the psychiatric unfit.—Though the screening of the psychiatric unfit is chiefly the responsibility of psychiatric units in induction stations, recruit training camps, and other advance training centers, a number of cases are first detected in the final staging area. In the final month of training, 38 patients had to be hospitalized for medical survey. Of these it is considered that 14 could have been detected earlier in their training, 20 were incapacitated because of psychiatric illness connected with combat or with other service conditions, and 4 developed a psychiatric disorder unassociated though coincident with service life. Brief histories of typical cases follow.

CASE REPORTS

Case 1.—A 23-year-old Marine was referred for psychiatric consultation because of his frequent disciplinary offenses, often associated with his apparent inability to understand orders given to him. He had been unable to learn in school, but had been pushed along to the seventh grade because of his size. Several times in civilian life he was jailed for such offenses as extreme profanity or flying into uncontrollable rages. On examination he was found to have an I. Q. in the moron range, and decided psychopathic tendencies.

Other cases that could have been detected earlier in training include 6 schizophrenics, 3 epileptics, 1 feeble-minded, a psychosis unclassified, a psychoneurotic, and a homosexual.

Case 2.—A 20-year-old Marine was referred because of a variety of neurotic complaints which did not respond to symptomatic treatment. He had been overseas 28 months, having seen action at Tarawa and Saipan. His symptoms began following his last campaign and increased in severity as further combat became imminent. His past history was irrelevant. He had completed the tenth grade in school, and had worked successfully as a machinist's apprentice. He was considered suffering from operational fatigue.

There were 19 other cases similar to case 2.

Case 3.—A 21-year-old Marine was referred by his commanding officer following a letter received from his wife expressing concern regarding his mental condition. His letters had become strange and incoherent. The past history was unrevealing. He had served satisfactorily in two combat operations. The family history revealed that his mother was confined in a state mental institution. On examination the patient was clearly psychotic, with blunted affect, distortion of thought processes, ideas of unworthiness, and auditory hallucinations. A diagnosis of schizophrenia was made.

Among the other cases unrelated to service conditions were another schizophrenic, an acute manic, and a man with migraine. In addition to the 38 patients who were hospitalized, 23 others were seen in the same period and were returned to duty after treatment. Most of these had mild neurotic symptoms associated with prolonged overseas duty. In the subsequent combat operation, none of these became psychiatric casualties.

Promotion of mental health.—After consultation with the commanding general, who was most cordial and co-operative, it was decided that a direct mental hygiene approach to the enlisted men in their final stage of training would be unwise, because of the danger of being more disturbing and provocative than helpful. It was thought, however, that a series of talks on psychiatric subjects would be most useful for the officers. These consequently were given to groups in the various regiments of the division.

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The talks were brief, lasting about 20 minutes. They stressed the military importance of psychiatric casualties, both in reduction of total strength and in effect on the morale of the remaining men. A parallel was drawn between mental health and physical health. It was pointed out that physical health was more than the absence of disease, that it was a positive matter involving the development of robust musculature, endurance, resistance to infection, and, in military life, particular immunity toward those physical diseases prevalent in the various war theaters, such as tetanus, typhoid, typhus, cholera, yellow fever, smallpox, and plague.

Similarly mental health comprises such positive elements as alertness, resourcefulness, high spirits and morale, courage, and particular immunity toward the chief psychiatric disorder of war, "combat fatigue." In the production of mental health in troops the following topics were discussed: Good leadership, with the recognition of the enlisted man as an individual; thorough training, resulting in self-confidence (the antidote to fear) under all battle situations; strategic orientation, knowledge of what we are fighting for; tactical orientation, understanding of the purpose and importance of the particular military mission; morale measures, including the full utilization of recreation officers, chaplains, and Red Cross representatives.

Preventive psychiatric measures in actual combat.—Officers were impressed with the importance of a proper attitude toward the man who is a psychiatric casualty in battle. Such a man is not to be considered a moral weakling, since any man, including the officers themselves, may be the victim if he is sufficiently exposed to the causative factors. The chief causative factors discussed were: Extreme and prolonged physical fatigue, lack of proper food, lack of water, insufficient sleep, exposure to cold and wet, and the psychologic effects of acute danger to oneself with the sight of others killed and maimed.

It was recognized that all of these are often unavoidable in a military operation. The purely military demands and exigencies must come first despite cost in men. Particularly is this true in the traditional Marine policy of aggressiveness and rapid attack. A quick win, notwithstanding casualties, may well save lives in the end. But in assessing the cost, officers must not lose sight of, or underestimate, the potential losses inherent in exposing men for too long a period to the catastrophic forces of war. Emphasis was placed on the value of more frequent rotation of men in the front lines, of providing as far as possible the elementary comforts of life, of rewards for the foot-slogging infantryman, and during rest periods, of the few luxury elements that are available even in the field.

In this last connection the full utilization of the Red Cross field representatives was urged. It was added that at times, when such a thing is possible, it is a tremendous morale booster to let men know when their period of ordeal is scheduled to end.

It was admitted that despite all efforts, some psychiatric casualties are inevitable. The importance of recognizing these cases as early as one recognizes physical casualties was emphasized, since immediate treatment is just as urgent in the one case as in the other. A comparison was drawn between the fighter and the familiar truck tire. Each can be retreaded if steps are taken before the wear is too great. But once the wear is allowed to go through the vital fabric, there is a "blowout" and each is through. In mild cases officers may take matters into their own hands and provide the necessary rest and rehabilitation. In more serious cases, however, the aid of the medical officer should be sought.

A word was added regarding officers themselves. Though they are undoubtedly more stable as a group than the enlisted men, they are human and have their breaking point. Since defection or loss of an officer is far more serious from a military point of view than that of an enlisted man, it is all the more important for officers to recognize the early symptoms of combat fatigue in themselves and obtain proper care. The chief early symptoms were mentioned (unusual fatigability, loss of appetite, insomnia, battle dreams, irritability, emotional instability, increased startle reaction, inability to concentrate, absent-mindedness, and general inefficiency). It was stressed that all of these are but exaggerations of the normal, and that many of us have some of these symptoms from time to time without the necessity for considering ourselves abnormal.

Preparations for the care of psychiatric casualties.—Medical officers in the division were indoctrinated in the psychiatric theory regarding the aforementioned causes of combat fatigue. Plans were made for the treatment of patients as near the front as possible. Patients with symptoms could be kept overnight in the battalion or regimental aid stations, given mild sedation and reassurance, and urged back to duty the next day. The more severely affected would be treated in the division field hospital.

Arrangements were made for the establishment of a psychiatric ward, preferably at some distance from the surgical wards. Special supplies in the way of sedatives in quantity, and materials for restraint were obtained, not without some little difficulty. A group of hospital corpsmen was selected, using the criteria of educational attainment and agreeable personality, and those chosen were trained in the theory and practice of psychiatric nursing. The interest of these men was stimulated by lectures and reading material. The services of the chaplains were en-

listed through personal contacts, so that the morale value of religious observance could be utilized to the fullest. A talk was given to the group of Red Cross field directors assigned to the division, and one man was especially designated to serve the patients in the psychiatric ward. All

these men proved keenly interested in the problems of the psychiatric casualty and many suggestions were forthcoming regarding ways of boosting the morale of the patients through personal attention and the provision of recreational and comfort items.

CHAPTER 19

FATIGUE*

Once a chronic type of emotional illness is established, return to active duty is contraindicated. This policy is based on previous war experience. It is recognized, however, that any well adjusted individual, subjected to severe physical and emotional strain may become temporarily ill. At the same time he may be a desirable individual for retention in the naval service.

One of the most commonly encountered symptoms in all diseases is fatigue. It is especially prominent in personality disorders. The understanding of this symptom is essential for the proper differentiation of the acute from the chronic types of emotional illness.

The word fatigue, although universal in medicine, has a different meaning to every physician. In Webster's dictionary the definition is brief, concise and practical: "Fatigue is the loss of power due to continued work, but removable by rest." With this as a foundation it is essential to review fatigue as seen in medical practice. Judged from its presence in various scopes of medical sciences, fatigue is a vague term. Throughout the years it has been a problem for investigation in medical research. To some physicians fatigue is a disease entity. To others, it is considered a symptom of a disease. Psychologists stress the biochemical products influencing the metabolism of the central nervous system. Psychiatrists, dealing with the personality responses, express many theories as to its production. Muncie (1) quotes Dill as saying: "There appears to be little prospect of developing a simple and adequate hypothesis regarding the origin and nature of fatigue." This statement followed long periods of extensive research. It demonstrates the complexity of the problem of fatigue in medicine.

This present study will endeavor to take up fatigue as the total personality responses to work and stress. This would include the subjective symptoms and objective physical signs. The laboratory findings, chemical and

physical, cannot be overlooked. Finally the total personality reactive tendencies must be stressed. Each individual, therefore, will vary according to his heredity, construction and personality responses to life situations.

Most authorities agree that there are two main types of fatigue, the acute and chronic. Unfortunately, they frequently are seen in combination, which confuses the total picture. Under the present wartime conditions it is impossible to treat chronic personality disorders in base hospitals. Therefore, this study will emphasize the acute type of fatigue. An attempt to understand the acute without knowledge of the chronic type is impossible. Fatigue in general must be reviewed. All the facts must be analyzed and integrated.

DISCUSSION

Pillsbury (2) emphasized the chemical reactions, physiologic changes and the emotions as factors in the production of fatigue. However, an attempt to distinguish between mental and physical fatigue from a personality concept is impossible. McDougall (3) felt that fatigue was a state of raised synaptic resistance throughout the nervous system. It is manifested by subjective symptoms and objective signs. He and Hollingworth (4), using the same test object, recorded experimentally opposite results. Certain alterations occur normally while observing an ambiguous object. Fatigue produced a retardation and an acceleration of the rate of alterations. This might be explained by the individual personality response to the experiment. McFarland (5) in his studies on pilot fatigue in aviation found no single cause for this entity. He emphasized the factors associated with flying conditions and the influences of physiological factors as O_2 etc. upon the organism. He also stressed the emotions from personal conflicts as they affected the pilot's health. Muncie stressed the individual personality response in discussing the normal psychobiology of fatigue. He showed the normal variation in the individual. It is a well known fact that one recovers quickly with rest from great physical effort.

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Also, prolonged mental stress requires a longer rest period prior to recovery.

Thus it is evident that separation of the various factors in fatigue is a difficult problem. It is due to a combination of many complex reactions representing the total psychobiologic response of the organism to work, mental, physical, and usually in combination. It will vary in each individual according to his personality reactive tendencies. The only way to evaluate its presence is by a complete study of the total personality functions in each case. It is evident that many psychologic, biologic and somatic theories have been formulated. Fatigue, as a psychobiologic reaction, is the only adequate explanation. It is frequently present in civil life. Under the stress of modern war it will occur more easily and readily. In the following an attempt will be made to observe its presence clinically with emphasis on military psychiatry. For practical purposes, fatigue may be divided into the acute and chronic types.

In the acute type the subjective symptoms of weakness, lassitude and tiredness are usually in harmony with the physical findings on examination. These will vary in each case but are usually those of weight loss, insomnia, dehydration, and other physiologic concomitants. The history will reveal long-continued stress, physical, emotional, or both. Although insidious in its onset, the clinical manifestations will usually begin abruptly. The emotions will be in keeping with the previous personality reactive tendencies and hence will vary. Tension, fear, or anxiety will be outstanding. However, depression, apathy, or other affective responses may be present. Irritability, seclusiveness, lack of interest, or enthusiasm might be the prodromal symptoms.

These reactions might be seen in the following types of personality disorders:

1. Exhaustion syndrome.
2. Depressive reactions of all types. Manic-depressive, tension depressions, situational or any basically affective illness.
3. Acute anxiety states with their closely allied panics.
4. Postinfectious states.
5. Delirious reactions due to infections, drugs, and exhaustion.

This leads to an important topic, the recognition of acute fatigue in these various personality disorders, and decision as to whether or not return to active duty is warranted.

Sargent (6) reported interesting observations on the British soldiers at Dunkerque in 1940. He applied the term "exhaustion syndrome." The soldiers had a masklike facies, sallow complexion and a few had a pill-rolling

tremor of the hands. There was a history of a long period without food, sleep or rest. Severe physical and emotional stress with long continuous marching had been present. Some were tense and anxious while others were apathetic. Several talked with pressure regarding their harrowing experience. Others were mute and negativistic. In general, their sleep was broken and characterized by terrifying dreams. Many showed the usual findings of weight loss, dehydration, and physical exhaustion. Should this type of reaction come under observation, certain possibilities exist. First, the patient might recover rapidly within a period of 1 to 3 weeks. The previous personality adjustment being satisfactory, with convalescence he could return to active duty. However, should recovery be prolonged, despite his previous personality adjustment, he should not be returned to active duty. The experience of psychiatrists in military and civil practice justifies this disposition. Once a personality substitute reaction has been utilized in a life situation, later in times of stress it is apt to recur. The pattern is like a conditioned reflex, which, once established, occurs more readily and with less strain.

Depressive fatigue as seen in affective illnesses should not be difficult to recognize. The family history, previous attacks, and present difficulties should be helpful. The mood statement and psychiatric examination should clarify the total picture. In addition, depressive fatigue has certain distinguishing qualities. It is mood determined. There is a lack of initiative with the feeling of sadness. The diurnal variation is characteristic, being worse in the morning and improving as the day progresses. It is partly alleviated by effort and activity. Once this type of fatigue has been established the obvious disposition is not to return the patient to active duty. Gillespie (7) described the anxiety reaction (depressive state) seen in combat. This type usually occurs in obsessive individuals working under severe mental stress. It is frequently observed in officers. The long continued effort in unfamiliar surroundings with new work results in a fatigue reaction. The symptoms and signs as described by Gillespie suggest a chronic type of fatigue reaction. It certainly has many of the characteristics of a depressive illness. However he emphasized the presence of restlessness and apathy more than the depressed mood. In this type of reaction there are present probably features of both acute and chronic fatigue. Should the symptoms and signs prevail following the institution of treatment over a limited period, then the chronic fatigue will be the primary problem. If this is established and confirmed, the individual would not be fit for return to active duty. Delirious reactions with exhaustion resulting from infections and drugs, etc., need individual care and study. The typical syndrome with

clouding of consciousness, disorientation, fear and hallucinations, should clear up rapidly with prompt and appropriate treatment. If the review of the previous life adjustment is satisfactory, return to active duty is justifiable. However the chronic types, as seen in hysteria, manic states, and schizophrenic reactions, show evidence of total personality dysfunction. The appropriate disposition in such cases should be as permanently unfit for active duty.

There is a type of fatigue which is quite difficult to evaluate. It is that reaction which follows postinfectious states, especially influenza and pneumonia. A similar phenomenon is the debility seen in hyperthyroidism and brucellosis. In order to determine the disposition of these complicated cases, one would have to evaluate the individual problem. Therefore his life situation, previous adjustments, etc., must be judged according to one's common sense. At the same time, it must be remembered that active duty in the Navy usually implies ability to do any task which he may be called upon to perform, either at sea or on land.

Thus in the acute type one would expect a history of exposure to marked physical and emotional stress. The subjective complaints would be in keeping with the physical findings on examination. The emotions will be in keeping with the previous personality reactive tendencies and therefore vary. The onset will be acute, on the surface at least. Most important will be the recovery with a brief period of treatment. The physical condition is primary and the emotional factor is secondary. Possibly a theoretical case illustration might help clarify the issue. Any person under the stress of modern war or combat might be exposed to long and protracted physical and emotional expenditure. In battle conditions, facilities for proper nourishment, rest, and diversion must be unattainable at times. Sufficient quantity of fluids and normal physical hygiene will be absent. The deaths of comrades and other harassing experiences must be distressing to the emotions of the individual. Under such circumstances, one's so-called "resistance threshold" must be quite high to prevent fatigue. This combination in sufficient proportion might produce symptoms and signs of fatigue in any normal person. The physical reactions and total personality responses will be different in each individual.

Certain specific rules must be applied in each case prior to the establishment of acute fatigue as an entity, if return to active duty is made the objective. Three things are essential:

1. There must be a history of prolonged work, physical, mental, or both, with some exposure to severe physical stress.

2. Complete recovery with rest and treatment must take place within several days to 4 weeks at the most.

3. Complete psychiatric studies, including family, and personal history should be made. The personality study and the preceding must show a reasonably well adjusted individual.

Chronic fatigue is a totally different problem. From the standpoint of treatment in the Navy, it is of purely academic interest. In this paper we are concerned with the clinical application to naval psychiatry. Ross (8) and Muncie (9) state that fatigue of a chronic and disabling sort without any evidence of organic disease must be considered "emotional." This viewpoint is shared by most workers in all fields of medical practice. Symptomatically, the individuals will complain of "being tired." Others will be "exhausted," or "too tired to do anything." At times the only complaint is that "I'm weak." There will be difficulty in beginning, performing, or completing a task adequately. Initiative is paralyzed physically and mentally. At times the desire for work is present; however the somatic motor response is lacking. Ross points to a common observation, the selectivity of this type of reaction. An illustration and common observation of this fact is the ability of these individuals to talk for hours with a physician without effort. Nevertheless, they become exhausted quickly and rapidly while conversing with an emotionally involved parent or relative. The many subjective complaints are not in keeping with the actual physical state observed. Occasionally a state of physical exhaustion is observed. However investigation will show that it is secondary and not primary. The long-standing anxiety or tension affects body metabolism. Sleep has been disturbed over a long period. There is altered gastric motility with consequent vascular and secretory disturbances. This leads to gastro-intestinal symptoms and loss of weight. Thus, the actual physical condition observed is indirectly the result of emotional stress.

Followers of some psychiatric schools would probably not agree with many of these explanations. However, the interesting observations of Ross on psychiatric treatment over a number of years are self-explanatory. He found that those individuals who recovered with rest alone actually improved through the efforts of the physician. The psychotherapy on the psychiatrist's part at times was probably unknown to him.

The emotions as a factor in this reaction are stressed by all writers. An excellent military illustration is cited by Ross in World War I. The British soldiers in the retreat from Mons had little food, sleep, or rest for a week. Sufficient fluids and distraction from their plight were inadequate. When finally relieved of their peril, the entire

regiment was physically exhausted. With 2 or 3 days of rest, most of the men were able to return to battle. This group had acute fatigue or exhaustion. Another smaller group was never again fit for duty. Their difficulties had their onset prior to the actual physical stress. Interestingly enough, neither group was conscious of fatigue during the actual exposure while furnished with a psychologic objective. However once relieved of the threat of annihilation, the symptoms developed. The chronically disabled group improved with rest, but not totally or completely. For a period of psychotherapy seemed to be rehabilitating them. However all improvements seemed to cease with the establishment of the pension system. This system, although humanitarian in chronic personality disorders, is not constructive or conducive to successful treatment. It encourages a parasitic life attitude with regard to ambition, goals, and strivings. Hence the very sense of security it supplies freezes the emotional energy essential for a healthy life. Although necessary and essential in many individuals, it makes psychiatric treatment impossible in a large number of individuals.

Dejerine, as quoted by Ross, gives another example of emotions affecting fatigue. A regiment in a long march requires frequent rest periods because of fatigue. However, when the band suddenly plays martial music, all symptoms of fatigue disappear. This is explained by distracting the troops from their thoughts of family, home, and various conflicts. It also actively attracts their attention and relieves boredom. Chronic fatigue, according to Muncie is a neurotic reaction due to emotionally tinged attitudes. It is the personality dysfunction arising from drifting, monotony, boredom, and chronic futility feelings. These individuals, in childhood, are dependent types and continue this attitude throughout life. As adults, their goals and strivings are not attainable. In some the lack of a true life goal makes daily living a monotonous existence. Longitudinal sections of their life chart reveal neither major victories nor defeats. Frequently the same pattern of reaction was present in the parents.

Clinically, chronic fatigue, unlike the acute type, is present in practically all personality disorders:

1. Psychoneuroses of all types, especially those characterized by anxiety.
2. Both phases of affective reactions, especially the depressive types of illness.
3. Many schizophrenic reactions.
4. Practically all illnesses associated with the involutional period.
5. It is a physiologic process with aging, but also an early symptom of cerebral or generalized arteriosclerosis. Thus although more characteristic of some personality

disorders, it is present in practically all types of reactions which deal with altered personality function.

This last fact leads to the problem whether or not certain personality types are more susceptible to fatigue in military service. The British psychiatrists (10) have made important observations in their experiences. They found that individuals between the third and fourth decade of life and especially those above the fourth decade, fatigue more easily. Therefore they should be studied more closely before enlistment into the armed forces. Again, those subjects whose habitus or constitution is either above or below the average individual had a higher incidence of fatigue and personality disorders. At the same time certain types of men who had suffered many illnesses in the past, irrespective of the nature of the condition, usually proved easy subjects for fatigue. Eventually they were unfit for military service. Another type of person who reacts more readily to fatigue with strain is the obsessive individual. He is above average intelligence, usually passive and inclined to be rigid. In general, he is usually single, somewhat sensitive and timid. This individual is apt to worry and fret to excess. In unfamiliar surroundings with increased responsibility, he finds adjustment to military life rather difficult. In order to accomplish his work in a perfectionistic manner, he really overcompensates. The result of the vicious cycle is an increased susceptibility to fatigue and personality disorders.

Therefore, the emotional difficulties due to lifelong defects in personality functions are characteristic in chronic fatigue. The etiologic factors which might operate are immaterial. From a naval standpoint, the primary object is to eliminate these patients from active duty, with their rehabilitation to civilian life a secondary consideration. Prophylaxis at the recruiting stations for all personnel will make an efficient combat force. The physical defects in chronic fatigue are secondary when present, and recovery requires a long period of psychiatric treatment. This is impossible in the present status of naval medicine. Neither the time, facilities, or physicians are available for such a gigantic task.

SUMMARY

Fatigue is usually found to be an accompaniment of all types of disease. It is especially significant in personality disorders. Actually, it is a syndrome which manifests its presence by subjective symptoms and physical signs. The ratio between the two determines the varieties, acute and chronic. The former is characterized by many physical factors and secondary emotional problems. The latter type, in the absence of any organic disease, is always emotional. Hence it follows that the subjective complaints

predominate and the physical findings are of lesser importance. It is impossible to group or differentiate either type of fatigue without the study of each individual case. The evaluation of the personality function must include not only the horizontal, but especially the longitudinal cross section of the individual. The total personality must play a role in the production of fatigue. Certain components will seem to play a leading role. However to emphasize the intellectual functions and at the same time avoid the somatic component would be negligence. The emotions, with the resulting conflicts from instinctive feelings, family relationships, etc., play a major role. It would be an incomplete study to disregard any one part of personality function. Fatigue is the total personality reaction to work, mental, physical, or both. In order to aid a "fighting Navy," the acute type of fatigue should be stressed. The exhaustion syndrome described previously, with certain absolute qualifications, would be a close simile. Chronic fatigue, in the absence of any structural disease, is always due to personality difficulties. At the present time the obvious disposition is to return these individuals to civil life. Caution and conservatism should be the guide in evaluating any illness in which fatigue is the outstanding symptom.

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CHAPTER 20

TREATMENT OF COMBAT FATIGUE IN A FORWARD-AREA HOSPITAL*

Other publications (1) (2) (3) have described specific technics for the treatment of combat fatigue, such as hypnosis, intravenous sodium pentothal combined with narcosynthesis, and modified insulin therapy. These diverse methods have apparently all been about equally successful, which fact has aroused the speculation that some more fundamental factor common to all has at least in part been responsible for the therapeutic successes achieved. In this article yet another form of therapy will be described and an attempt will be made to account for the similar results attained by these divergent methods.

The neuropsychiatric department of this forward-area hospital has during the Pacific campaigns received a number of combat casualties, the majority diagnosed as combat fatigue. Of these, 80 percent have been returned to duty. The majority of these patients were young Marines, some with considerable previous battle experience, others relatively recently overseas.

Our criteria for "Fatigue, combat" were rather strict. Any patient who gave a past history with more than mild psychoneurotic traits was excluded from this study, and only those were considered who had been well adjusted socially and free of psychoneurotic tendencies.

Upon admission these men presented the rather uniform clinical picture which has been frequently described. In our opinion these presenting symptoms may be roughly divided into two general groups: (1) *Symptoms of anxiety*, either frankly manifested in conscious fear, nightmares, startle reaction, weight loss, tremors, irritability, restlessness, insomnia, tachycardia, and/or anxiety exhibited in transient conversion phenomena such as amnesia, paralyses, or aphonia; and (2) *socio-psychologic symp-*

toms, such as feelings of shame because of fear, guilt for having failed one's comrades, feelings of dissatisfaction with the service, with the war and the conduct of the war, feelings of inferiority and inadequacy, homesickness, and a marked preoccupation with the family, particularly parents, who are often thought to be sick.

The emotional dislocation responsible for the enumerated socio-psychologic symptoms, is also responsible, we believe, for a change in the patient's general attitude. Crispell (4), from a study of 500 men, has described the following attitude as being typical, with which we fully agree . . . He is "quite upset by his experiences, he did not want any more battles for awhile—perhaps never again; if some more battles had to be fought, then somebody else ought to fight them; he thought that he ought to go home right away." Depending upon the particular individual, the symptoms of one group would be more marked than the symptoms of the other; in some the anxiety features predominate, in others guilt and dissatisfaction are the outstanding findings. But in every one of the patients, symptoms of the two general groups were present to a pathologic degree.

Except for a few patients, this was the first hospital reached following evacuation from the combat zone; in a great majority less than 10 days had elapsed between evacuation from the beachhead and hospitalization here. While enroute, because of excellent care, many of the anxiety symptoms had considerably abated, but it is our impression that in not a few patients the socio-psychologic symptoms had become enhanced.

It seemed to us, after a few of these men had been studied, that the concept of combat fatigue had a twofold connotation, and that the admission symptoms as described above bore this out. As the diagnosis literally carries, these men were tired and were tired of combat; that is, they had been subjected to almost constant danger of

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injury and destruction, had worked hard physically, had had minimum rest and food, and had lived under extremely primitive conditions. These factors may well be the ones responsible, at least in part, for the anxiety manifestations.

On the other hand, combat fatigue appeared also to involve a more subtle, yet quite definite socio-psychologic feature. These men had been emotionally sustained and morally encouraged by their membership in a group, that is, their unit or outfit, but concurrently with the onset of combat fatigue came an altered relationship to this group. With a change in this relationship the man quickly ceased being an efficient combatant and became instead an isolated, frightened, homesick individual deprived of his up-to-then sustaining emotional ties with his group. His attitude toward the group underwent a marked change in that he became critical and fed up with his companions, he felt he was through with the service, and he desired to return, literally and psychologically, to earlier, more protective and emotionally more sustaining persons, such as parents and others at home.

The treatment of combat fatigue involves not only evacuation from combat, rest, cleanliness, adequate nutrition, and medical care, but also a psychologic re-orientation toward the group of which the man had been a member until the time of his illness. The relief from anxiety and all its concomitants is to a certain extent attained by the mere physical facts of removal from the combat area, hospitalization and proper physical care. For the psychologic re-orientation, a special program had to be evolved.

In order to re-awaken in the patient the feeling of belonging to a group and the desire to remain within the same, we deliberately fostered a group spirit within the neuropsychiatric department as a whole. This was accomplished by encouraging a general therapeutic intent in the staff personnel, particularly the hospital corpsmen and nurses. The general objective of the department—return to duty of patients—was repeatedly emphasized to the point of its becoming axiomatic.

Lectures covering the elementary aspects of psychiatry were given by the neuropsychiatric medical officers. Corpsmen and nurses were specifically indoctrinated and encouraged to maintain an optimistic attitude toward the patients. A general atmosphere was built up in which it was taken for granted that the patients would return to duty after a relatively brief period of hospitalization. The department was able to arrange an active recreational program to which a psychiatrically trained chief pharmacist's mate was assigned, and in which staff members participated freely. An active occupational therapy program was also instituted, and through joint efforts of all staff members a fully equipped workshop was gradually assembled, in

which patients and staff members alike spent much time under informal circumstances.

The patient is absorbed into an actively functioning, well integrated group, with which he can identify himself providing his general physical condition permits. We have found that as soon as the patient becomes an active and participating member of the local group, so to speak, the psychologic re-orientation will carry through and he will himself express his desire to return to his own former outfit. These are the general features of the program which has gradually been evolved.

Upon admission, the neuropsychiatric combat casualties are greeted and briefly interviewed by the head of the department, who at that time roughly segregates the patients into (1) the recoverable, combat fatigue cases which as far as possible go to a special ward, and (2) the chronic, psychoneurotic and psychotic types (a minority), who as early as possible are segregated from the recoverables. Physical examinations and brief neuropsychiatric evaluations are completed within 24 hours after admission so that treatment for all minor physical ailments can be immediately instituted, requests for consultations with other services made, and perhaps most importantly, so that the patient from the start is made to feel that the regaining of his health is the primary concern of all. Brief lectures explaining the general organization of the ward and the duties and privileges of patients are given by the ward medical officer during the first few days.

During the first 24 hours the patients may remain in or on their beds at will, but subsequently no patient may lie on his bunk during the day unless specifically permitted by his medical officer. The reason for this rule is explained to the patients, who themselves soon realize that little sleep may be expected at night if the day hours are spent on or in bed. The patients are urged to participate in the quite active recreational program, such as baseball, volleyball, badminton and swimming parties. Those who for physical and/or psychologic reasons do not feel up to active participation are nevertheless urged to accompany the group as spectators.

Every effort is made to make the patients comfortable, but certain duties are assigned them from the start. With the hospital corpsmen and under the supervision of the nurse they are responsible for the cleanliness and orderliness of their own beds, lockers, and the ward as a whole. A general atmosphere of friendliness is deliberately built up on the ward by the staff, without loss of necessary discipline and military courtesy. Sick call, for example, is made with the patients at attention, but during sick call each patient is given full opportunity to talk over his symptoms.

The daily ward-routine is organized along the following lines:

- 0530—Reveille.
- 0545—Every patient polices his bunk, locker and immediate area.
- 0630—Breakfast.
- 0730—Sick call.
- 0800—Ward details.
- 0900—Ward closed to patients who go for games, to work-shop, work in garden, Red Cross building, or to assigned places within hospital compound.
- 1100—Return to ward; clean up for noon meal.
- 1130—Chow.
- 1230—Rest period on ward.
- 1330—Ward closed for 2 hours, same activities as at 0900, with addition of swimming parties twice weekly.
- 1530—Return to ward; clean up for evening meal.
- 1700—Chow.
- 1800—Rest and free period.
- 1900—Sick call.
- 1930—Movies, general hospital entertainments.
- 2130—Lights out.

With few exceptions, the patients take their meals in the general mess hall after the first week in the hospital. Whenever meals are served on the ward, the patients eat in a group at a large table at one end of the ward; a sheet serves as tablecloth and attractiveness and cleanliness are encouraged. Patients wait upon themselves and clean their dishes in rotation. Corpsmen occasionally join the patients at their table. Smoking on the ward is restricted to this one end; smoking on or near the bunks is not allowed. As far as possible, a homelike atmosphere is created; by the same token each patient is expected to treat and consider the ward as his temporary home. Visits by patients from other hospital departments are not encouraged; such contacts are made to a sufficient degree in the general mess hall.

The workshop building is a 16- by 16- by 10-foot standard Marine tent erected immediately adjacent to one of the neuropsychiatric wards and so arranged that access to it is gained only through the department entrance. Its deck is made of scrap lumber; along two walls are solid work benches with vises. Over and under the benches are shelves and lockers for tool storage. The shop is surprisingly light, cool and well ventilated; from 10 to 12 patients are accommodated without crowding.

No tool is hospital issue; thus the hospital maintenance department is not deprived of any implements and has no claims upon the shop. The tools have been gradually procured from other outfits as they move out from this area, some were surveyed as worn out and have been repaired by ourselves, others are not properly tools but improvisations of utility. Power tools have not been procurable but would be highly desirable. A remarkable variety of objects

may be fashioned in wood, metal, and plexiglass by the use of a file, saw, plane, and a few drills. The shop is for the exclusive use of neuropsychiatric patients and staff.

A third activity centers around the grounds between the neuropsychiatric buildings. Here a rock garden has been laid, and plants, bushes, orchids and palm sprouts have been transplanted. Shop-made chairs and benches and pingpong tables are placed around the grounds. In one corner a vegetable garden has been planted, the produce of which is zealously guarded by all.

During his first 10 days of hospitalization, each patient is thoroughly examined by a psychiatrist. Explanations and reassurance are given during the anamnesis, and with suitable patients additional psychotherapeutic sessions are held, singly or in groups of three to four. All are encouraged to come to the psychiatrist with any problems.

For relief of anxiety, methods have been used as varied as the personalities of the patients. For some, hypnosis has uncovered areas of amnesia and other conversion manifestations; for others, intravenous sodium pentothal and hypno-analysis have had beneficial cathartic effect; for yet others, sedatives by mouth have been sufficient. For some patients, cold sheet packs have been of equal if not greater benefit than chemical sedation. Men greatly underweight with poor appetites have been given insulin up to 60 units daily in order to stimulate the appetite.

We have, however, gained the impression that for the alleviation of the acute anxiety symptoms no one method is superior to another; the treatment of these must be determined by the needs of the patient. As a rule medications are used as little as possible and it is clearly explained to both patients and hospital corpsmen that the sooner one can do without drugs the sooner one will be well. In general the symptoms of fatigue and anxiety which properly are a part of combat fatigue, have been found to disappear within about 2 weeks under the treatment outlined above.

The psychologic re-orientation, which we believe is equally necessary for recovery, is attempted also from the day of admission. By being encouraged to participate in sports in which corpsmen, nurses and doctors already actively participate, the patients soon feel a comradeship and before long teams and tournaments develop. It is remarkable to observe how quickly a disgruntled and dissatisfied patient will take an interest in a competitive sport, if he is properly approached.

In the same way the workshop provides a variety of opportunities for making things for one's self, in conjunction with a larger group. In this shop "basket weaving" is discouraged but realistic objects are encouraged, especially those of a warlike nature. Thus 105-mm. shell casings are

made into ash trays, models of P-38s, hinges and corner fittings for sea chests, etc.; enemy trophies are repaired and polished; native hardwoods are carved; and bits of aluminum and plexiglass from junked planes become identification disks and watch bands. Each patient keeps as his own that which he makes in the shop. As long as the staff as a whole participates in and maintains an enthusiastic attitude toward the shop activities, the patients will soon enter in and as it were "join the group." It is important that the shop be maintained as a therapeutic means and its facilities restricted to this purpose at all times.

Once the anxiety symptoms have been relieved, and the identification with the department "group" has been made, it is gratifying to observe how smoothly and spontaneously the membership feeling for the original unit or outfit returns. Within 2 to 3 weeks, many of the men spontaneously express a desire to rejoin their outfits, i.e., return to duty; with others it is only necessary for the medical officer to point out that the patient's life has become as active and productive as prior to his illness, and he sees the point of returning to his activity.

It must be noted that these patients upon discharge from this hospital have rejoined their outfits but have not directly returned to combat, as the particular campaigns from which they were evacuated were already over by the time of their hospital discharge. It has, however, been made clear to the patients that by rejoining their old combatant unit they necessarily and automatically soon come in line for further combat duty.

An active recreational and occupational therapy program such as described, in itself has a direct benefit in building up a man's self-confidence and creative ability. A game such as baseball has a reassuring effect on a man's self-confidence especially when well played before an audience; it supplies means of discharging pent-up aggressions through the physical activities involved and through the continuous banter that passes back and forth. The revival of old skills and the learning of new ones in the shop, visibly embodied in the finished product for all to behold, give to most men a healthy glow of self-satisfaction.

We feel, however, that in addition such a program is distinctly of therapeutic benefit because it is a group activity. Thirdly, and perhaps of major importance, the morale of the staff, particularly that of the hospital corpsmen, remains high when they actively partake in the building up and maintenance of such a program; and as the corpsmen have the most frequent contacts with the patients, high morale among the former will effect the same in the latter group. During the first few months we were in operation and before plans had been formulated and materialized, the return-to-duty percentage of combat

fatigue patients was strikingly lower than that subsequently achieved. The growth and expansion of the whole therapeutic program has been paralleled by a steady rise in recovery rate.

We are highly appreciative of and admire the recreational, occupational, and morale-building work of the American Red Cross. Many of our patients have availed themselves of their hospitable facilities. We do feel, however, that the combat fatigue patients require in addition a recreational and occupational set-up which has been deliberately infused with a specific therapeutic intent; such a program is for obvious reasons outside the scope of the American Red Cross.

About 4 weeks is the optimum time of hospitalization here. At the end of this time the patients should feel physically well, should have gained weight, should be free of overt anxiety and should desire to be back with their former comrades. Whereas few patients could stand to see a war movie at time of admission, they should now be able to view the same with relative objective detachment. As an experiment, several patients were kept an additional month; no additional benefits were observed from the prolonged stay. For patients of this type to remain longer than 4 or 5 weeks only prepares the soil for the growth of "hospitalitis."

The combat fatigue patients who did not return to duty from here were evacuated to the rear for further treatment and disposition. Their further course is not known to us. They had in general a more traumatic childhood history than those who recovered; had a higher incidence of broken homes, of paternal alcoholism, of parental desertion or death. Several had been childhood stutterers who after combat suffered exacerbations which were not sufficiently allayed while here to warrant return to duty.

These men were all somewhat improved, but either their anxiety symptoms persisted despite all treatment, or their feelings of guilt, depression and attitude of "being through," remained to such an extent that we did not feel justified in returning them to their outfits. They were transferred from here with the diagnosis of Fatigue, combat, as past history revealed no more evidence of precombat neuroses than shown by the men who did recover.

Finally the local geography and topography must be given consideration and due credit. By being treated here, the men remained in an area close to and essentially similar to the combat area, but free of its dangers. The physical environment here reminded them as little of "home" as it did on the scene of combat. By being evacuated to this area the patient is in no sense nearer "home" than he was while with his outfit—as a matter of fact, the latter, by its long time associations, seems more like "home"

than does the hospital. That "home" (U.S.A.) exerts a fatal attraction was clearly noticeable whenever a draft of surgical or psychotic patients was being made ready for evacuation to the States; on such days there was a distinct lowering of general morale on wards otherwise marked by their cheerfulness.

In conclusion it is suggested that the similar recovery rates achieved by other workers may at least in part be due as much to the intensity of the treatment as it is due to the treatment itself. In order to carry on any of these methods (hypnosis, sodium pentothal, modified insulin) much attention and care is required from the medical officers and the hospital staff; only organized and well-integrated teams can carry out these procedures. The staff and ward personnel must be geared for *treatment* in order to undertake successfully these therapeutic methods, and we believe that this very organization of therapeutic intent into a group, the staff, has in itself considerable therapeutic benefit for men with combat fatigue.

SUMMARY

A therapeutic program has been described for combat fatigue patients which we believe has at least in part been responsible for an 80-percent recovery rate in a forward-area hospital. This program is twofold, consisting of: (1) Active and specific treatment of anxiety symptoms and physical fatigue, individualized for each patient; and (2)

a deliberate inculcating of an enthusiastic group feeling among all staff members, so that the patient is provided a substitute group with which to identify himself. This temporary group-membership supplies the identification and membership feeling with his own combatant unit, which the patient lost incidental to his developing combat fatigue.

An enthusiastic staff spirit can be stimulated by attention to interpersonal relationships and by the use of such proven psychiatric technics as occupational and recreational therapy programs actively participated in by the staff. By patience and by the use of improvisations, such a program can be organized even in a forward-area hospital.

When the anxiety symptoms have been treated and abated, and when the patient has become a temporary member of the hospital "group," he is physically and psychologically ready to return to duty.

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CHAPTER 21

PSYCHONEUROSES PRECIPITATED BY COMBAT*

The incidence of psychoneuroses in the armed services in World War II was so great as to make it one of the major problems brought to the attention of the psychiatrist. These disturbances are found under war conditions among the civilian population, selectees, draftees, and soldiers and sailors on active duty. The variation in the intensity of the psychoneurotic symptoms and of maladjusted behavior has resulted in the introduction of such terms as "battle reaction" and "combat fatigue." It is possible in most instances to differentiate between patients whose symptoms are precipitated by unusual conditions, such as battle or shipwreck, in which the patient is exposed to unusually powerful stimuli occurring in dramatic sequence and those who develop symptoms without exposure to combat. The former group is usually referred to as "traumatic" or "combat" neuroses. It is this group of patients that is the major concern of this paper.

The purpose of this study was to ascertain whether patients with persistent psychoneurotic symptoms which were precipitated in combat, had a past history of similar or other psychoneurotic complaints. In addition, an attempt was made to study various physiologic functions under laboratory conditions of rest and stimulus, in order to compare the results with those obtained from psychoneurotic patients who had not been exposed to combat experience, and from a series of normal control subjects.

In a previous survey undertaken for neuropsychiatric data on the survivors of shipwreck, two groups of individuals were studied. The first was a group of 25 psychoneurotic patients who were survivors of shipwreck or sinking by enemy action, and the second was a control group of 41 survivors from shipwreck or sinking who had no neuropsychiatric symptoms. These studies included an investigation of the past history and an appraisal of

the current symptoms in an interview lasting one-half hour.

It was found that 72 percent of the psychoneurotic patients gave a history of having had psychoneurotic symptoms in civil life prior to entering the Navy. In contrast to this, only 11 percent of the control group of 41 survivors, when studied by the same method gave a history of psychoneurotic symptoms prior to enlistment. Of the patient group, 23 (91 percent) were troubled with disturbing dreams and difficulty in sleeping, and 18 (72 percent) had poor appetite and weight loss. In the control group only 2 (5 percent) were troubled with disturbing dreams or complained of poor appetite and showed loss of weight.

It was interesting to note further that 8 of the psychoneurotic group (32 percent) had suffered physical injury as against 23 of the control subjects (56 percent).

In order to check and evaluate the results of this survey another study was made of 26 patients with psychoneuroses precipitated by combat conditions. These were patients whose symptoms did not respond to the usual therapeutic measures available aboard ship or in the combat zone but were sufficiently serious and incapacitating to necessitate transfer to a base hospital in this country. The symptoms had been present in most cases for over 3 months and in some cases for as long as 1 year after the initial combat experience. At the time of the examination most of these patients were not suffering from other illness or injury and in most instances the physical and neurologic examinations were within normal limits.

As a control series for these patients with combat or traumatic neuroses, a second group was selected of 23 subjects who were not ostensibly suffering from any neuropsychiatric complaints or disorders and who had not come to the attention of the medical staff. These men were of the same age distribution as those with combat neuroses and had been through similar combat experiences. These

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subjects are referred to in this paper as the control series. In addition, a third group of 25 psychoneurotic subjects was studied who had not been exposed to combat, and whose symptoms developed while in military service at a shore station within the limits of the continental United States. This group is referred to as noncombat neuroses.

All three series of subjects were selected at random and were studied in essentially the same way. The nature of the procedure was described to the man and no one was examined against his will. It was explained that this clinical study would not appear in the health record and that they, therefore, need have no apprehension about its influence on any medical decisions as far as the Navy was concerned. In addition an electroencephalographic examination was made and the men were all subjected to an auditory stimulus, during which records of respiration, heart rate, and muscle tension were made. The data obtained from these various measurements are presented as follows.

INTERVIEW

The interview was conducted by a civilian psychiatrist and was modeled after a "controlled" interview which had been used in a previous study of 150 normal college students now training in the Navy. The interview which lasted 30 to 45 minutes was held in a closed room and arranged so that it could be taken down in its entirety by a stenographer in an adjoining room without the subject's being aware of the procedure. An attempt was made to keep the interview in the form of a free conversation, yet essentially the same topics were discussed with all of the subjects. The following topics were dealt with:

1. The present illness, with special emphasis on a description of the symptoms.
2. School and job history, with emphasis on psychoneurotic symptoms and social adjustment.
3. A brief family history, with emphasis on psychoneurotic symptoms and medical illnesses present in the other members of the family and on the subject's adjustment to his family.
4. Early childhood history with emphasis on the presence of psychoneurotic symptoms and neurotic traits.

The stenographic records of the interviews were studied and the subjects were divided into four groups on the basis of the following criteria:

1. Severe psychoneurosis. These were individuals who complained of definite psychoneurotic symptoms which had been present for long periods of time and which were severe enough to be disabling. These patients had a history of many neurotic traits in childhood, and a diagnosis of a specific psychoneurosis could be made on the basis of symptoms present before the patient had enlisted.

2. Moderate psychoneurosis. These subjects complained of psychoneurotic symptoms present occasionally for only short periods of time, and which on the whole were not disabling. In this group, however, a diagnosis of a specific psychoneurosis could be made on the basis of symptoms present before the subject had enlisted.

3. Minimal psychoneurosis. In these subjects the history revealed psychoneurotic symptoms which were only very occasionally present, and not in any way disabling or severe. There was no history of neurotic traits in childhood. On the basis of the history, as obtained during the interview, it was not possible to make a diagnosis of a typical psychoneurotic syndrome.

4. No psychoneurosis. In these patients there was no history of psychoneurotic symptoms and no neurotic traits in childhood were reported.

RESULTS

The incidence of symptoms reported in the group of patients with combat neurosis is presented in figure 7. The striking finding was the large percentage of gastro-intestinal symptoms (85 percent). The patients described feelings of shakiness, jitteriness of the stomach, feelings of turning and jumping inside. The symptoms peculiar to this group were the severe reaction to loud or even ordinary noises, and the presence of repetitive anxiety dreams, depicting in most cases some aspect of the combat experience. The other symptoms of headache, trembling hands, palpitation or precordial pain found in most cases were typical of anxiety neurosis. The most common diagnosis was anxiety neurosis, which occurred in approximately 80 percent. Most of the other cases were diagnosed as hysteria.

SYMPTOMS OF TRAUMATIC NEUROSIS (26 CASES) AS OBTAINED ON INTERVIEW

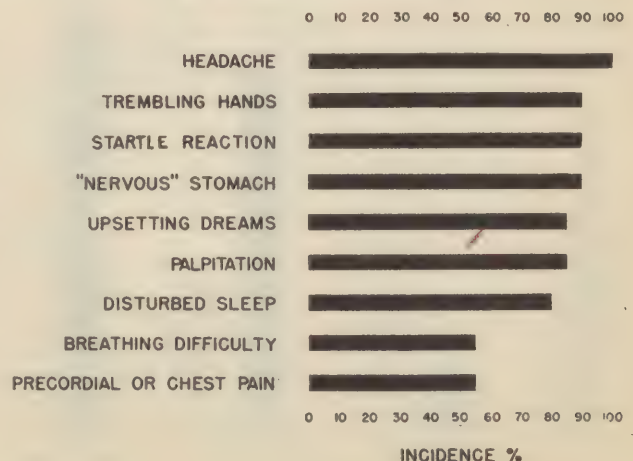


Figure 7.

From the history obtained during the interview, 80 percent of the combat neuroses group could be classified as having severe or moderate psychoneurosis and a further 12 percent had minimal symptoms. Only 8 percent were diagnosed as having no psychoneurosis. Of the 10 patients with noncombat neuroses, 9 had a past history of either severe, moderate or minimal symptoms. The same incidence of psychoneurotic symptoms was found in an additional group of 15 noncombat neuroses by study of their clinical histories. A review of the histories of 25 unselected civilian patients with psychoneuroses studied in the same laboratory, showed that all of these patients had psychoneurotic symptoms previous to the hospital admission (fig. 8).

Of the control subjects exposed to combat without apparent psychoneurotic symptoms, only 17 percent gave a previous history of psychoneurotic symptoms. This com-

pares rather strikingly with the findings in a series of 150 college normals studied previously. In this group a past history of symptoms was elicited in 15 percent of the subjects (fig. 8).

It is of interest to compare these data with the findings in the naval health records of these patients and in their examinations by naval personnel. A study of the health records of the 26 patients with combat neurosis revealed that a statement describing the existence of psychoneurotic symptoms prior to admission to a naval hospital was found in only four of these records (fig. 9). Only three of these subjects were diagnosed by psychiatrists at those stations as having pre-existing psychoneurosis, i. e., before admission to the naval hospital.

In the routine neuropsychiatric investigation during a stay of approximately 2 weeks before diagnosis and disposal, it was found that 21 patients or 80 percent showed some history of psychoneurotic symptoms prior to enlistment. Of this group 65 percent had moderate or severe symptoms and 15 percent mild or minimal. A comparison of the percentage of subjects with previous neurotic symptoms, as described in the health record prior to the base hospital admission, in the routine hospital examination, and in the specially controlled interviews is shown in figure 9.

The principal groups of symptoms which brought these patients to the hospital are shown in figure 10. A number of them had more than one complaint, but their most obvious difficulty was the inability to perform their routine duties.

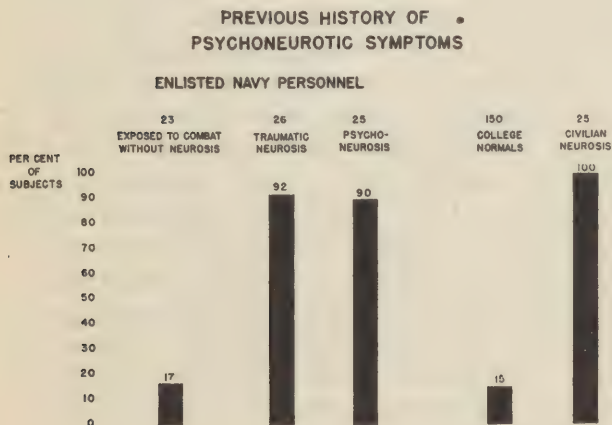


Figure 8.

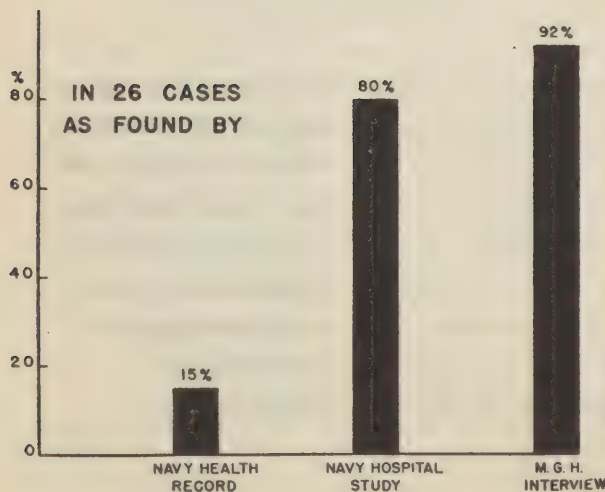


Figure 9.

LABORATORY FINDINGS

Electroencephalogram.—A standard recording was made from 6 scalp electrodes, one-half hour after the subject had ingested 100 cc. of 50-percent glucose in water

PRINCIPAL SYMPTOM GROUPS WHICH BROUGHT PATIENTS TO HOSPITAL

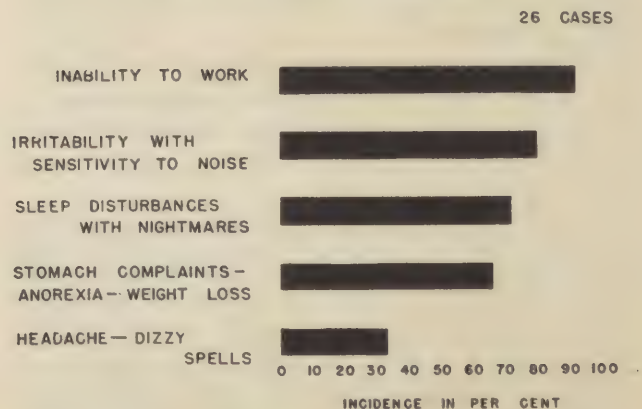


Figure 10.

to ensure a normal blood sugar level. The necessity for this procedure in the control conditions for recording EEG's has been described elsewhere.

The tracings from all these subjects were, on gross inspection, apparently normal and they were therefore subjected to a detailed method of analysis which has been developed in this laboratory for the grading of normal electroencephalograms. For this purpose, the recording of the bipolar occipital potentials during normal breathing is accurately measured for frequencies of component waves and also for voltage. From such measurements many characteristics of the electroencephalogram can be analyzed and studied.

In the present work the characteristic receiving special study was the distribution of dominant frequencies. By dominant frequency is meant the frequency in cycles per second of the majority of the waves present. It has been found in previous research on civilian psychoneuroses that the distribution of dominant frequencies differed from that of normal controls (which centers around 10 cycles), in that the most prevalent dominant frequency was at 9 cycles with subsidiary peaks in the faster frequencies at 11 and 12.5 cycles.

The EEG's of the group with combat neuroses were therefore compared with those of 31 civilian psychoneurotic patients and 115 college students considered normal. The results are shown in figure 11.

It will be seen that the distribution curve for the group of combat neuroses is very close to that of the college student normals excepting for the fact that the two peaks in the fast frequency range found in the civilian psychoneuroses are again present in this series. The interpretation of these findings is a matter for future investigation.

Auditory stimulus test.—The purpose of this test was to record the reaction of the subject to a disturbing audi-

tory stimulus. This consisted of an extremely high-pitched whistle of mixed frequencies and of great intensity, blown for a period of 3 minutes. During this stimulus period, for 3 minutes preceding it and for a 3-minute recovery period following it, recordings were made of the heart rate, muscle tension and respiration.

The heart rate was recorded from standard electrocardiographic leads by an ink-written oscillograph; the same instrument recorded simultaneously the electromyogram from surface electrodes attached to the flexor carpi muscle of the subject. Thus any gripping movement or tensing of the hand resulted in an increase of potentials from the muscle. These potentials were not only recorded on the electromyogram but were also led through an integrator working on the principle of a condenser which discharged every time a certain amount of electricity collected. Each discharge of the condenser was automatically recorded on the same tracing as the electromyogram, and this record gave a measurement of the tension of the muscle. The ventilation was recorded by having the subject breathe into a Benedict-Roth type of metabolism apparatus equipped with a ventilometer. The ventilation was measured directly from the breathing record and corrected for surface area, which was determined by means of the Boothby-Sandiford nomograph.

In figure 12 a summary is given of the reactions of the three groups of subjects to this auditory stimulus. It is very striking that in all 3 types of response, i. e., heart rate, muscle tension and ventilation, the control group was the most stable and reacted least to the sound of the whistle. The greatest reaction to the stimulus was observed in the patients with noncombat neuroses. This is brought out most clearly in the muscle tension response.

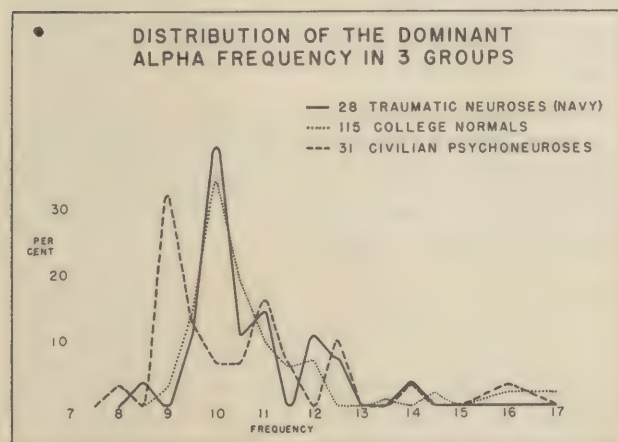


Figure 11.

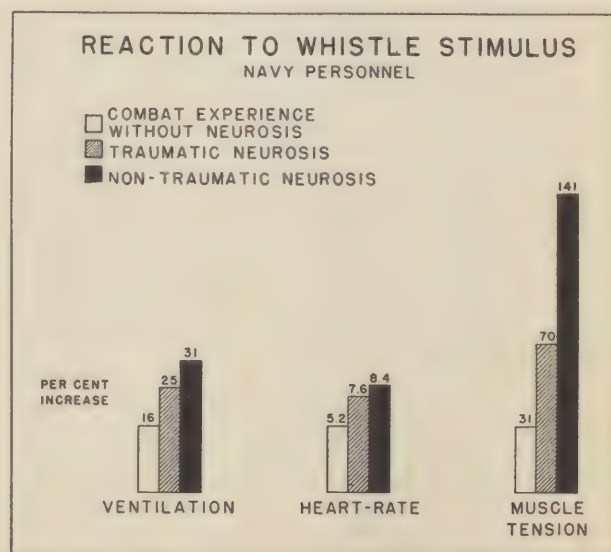


Figure 12.

DISCUSSION

This report indicates that a past history of psychoneurotic symptoms was found in approximately 90 percent of naval personnel who were diagnosed as having a persistent combat neurosis. In the control series, a history of psychoneurotic symptoms was found in less than 20 percent of the subjects. As a rule the symptoms present in the control group prior to enlistment were less severe and in most cases less incapacitating. It is to be noted that of the patients with combat neurosis about 25 percent had been in service for over 2 years. This fact would indicate that some patients who in combat develop severe psychoneurotic symptoms may, in the absence of combat conditions, adjust sufficiently well to do their duties with a reasonable degree of efficiency. Of men new to the service, in spite of the history of neurotic symptoms before enlistment, those with combat neurosis had, for the most part, been able to get along in civilian life without hospitalization or treatment for their symptoms.

It is difficult at present to determine exactly the degree of psychoneurotic symptoms which should keep a man out of the service. This study indicates that, were all individuals in whom was elicited a history of psychoneurotic symptoms to be excluded from the armed forces, we would be rejecting almost 20 percent of men who were able to carry out their duties under combat conditions without coming to the attention of the naval neuropsychiatrists. On the other hand, we would also be excluding over 80 percent of the individuals who subsequently developed combat neurosis. From the statistical point of view it would seem that a greater efficiency in selection would be achieved by excluding all men in whom a past history of psychoneurosis exists. This would be especially wise if there were an abundance of manpower.

Patients who develop symptoms without actual exposure to combat situations are more vulnerable than those who develop combat neurosis. It would seem that in these patients the psychoneurotic reaction is elicited by stimuli of much smaller intensity than is the case in the patients with combat neurosis. The auditory stimulus test corroborates this impression by showing that, when exposed to the stimulus, these patients (noncombat neurosis) had a greater reaction in respect to measurements of muscle tension, ventilation and heart rate than did the patients with combat neurosis.

Our data revealed that almost every subject exposed to combat conditions reacts to the overwhelming stimuli with subjective feelings of fear and with palpitation, shortness of breath, chest pain, gastric symptoms and tremors. In many, the reactions are of short duration and rarely recur when the individual is removed from the stimuli. In other individuals the reaction persists for a prolonged time. In some patients the reaction, after a slow period of extinction, readily returns in relation to combat stimuli or associated stimuli. Symptoms which last 4 to 5 weeks after exposure to combat conditions, and which are sufficiently aggravating for admission to a base hospital are found in patients usually giving a past history of psychoneurotic symptoms. These symptoms can be readily elicited when neuropsychiatric studies can be made by qualified personnel.

SUMMARY

Three groups of naval personnel were examined in this study; 26 cases of combat neurosis, 25 cases of neurosis in individuals not exposed to combat, and 23 control cases exposed to combat without development of neurosis.

This study revealed the following results:

1. A past history of psychoneurotic symptoms was found in approximately 90 percent of both groups with neurosis, but in only 17 percent of the control series.
2. The most striking symptoms in the combat neurosis group were gastro-intestinal disturbances (85%), severe reaction to noise, presence of disturbing nightmares and headaches. The reason for their admission to the hospital on the other hand, in over 90 percent of the cases, was their inability to do their work.
3. The most common diagnosis was anxiety neurosis which accounted for 80 percent of the combat neurosis group.
4. The electroencephalograms of the combat neurosis group were seen to have some of the characteristics which, in another study, have been found to differentiate the EEG's of patients with psychoneuroses from those of normals.
5. An auditory stimulus was found to have more effect on the ventilation, heart rate and, in particular, on the muscle tension, of the group of noncombat neuroses than on those with combat neuroses, the control group being least affected by the stimulus.

CHAPTER 22

COMBAT FATIGUE AND WAR NEUROSIS¹

Much has been written on the "war neuroses," some descriptive, volumes statistical, a great majority interpretive and dynamic, very little that can be applied directly to these problem cases by the medical officer of general training who must handle them in their critical stage. Agreement has not been reached even on the answer to "What is a war neurosis?" Certainly all are agreed that the usual psychoneuroses encountered in peacetime should not be termed "war neuroses" simply because they occur in a war setting. Removing these, we are left with a group of cases which do not conform entirely to the nosological criteria of psychoneuroses, and which can be classified as such only with some difficulty. It is this group of cases in which we are interested, actually presenting more a question of psychoneurotic symptoms in previously stable persons, than of true psychoneuroses. We are confronted at once with the problems of what to call these cases and how to delineate clearly the syndrome variously called "war neurosis," "traumatic neurosis," and, of late, "combat fatigue." These three terms are used interchangeably throughout most of this paper, with some discussion later as to which is the most acceptable. None seem to us particularly desirable, descriptive, or accurate, any more than the "shell shock" of the first world war, but we are forced to admit that we have no better suggestion to make.

Rado has considered the "traumatic neurosis" a result of the breakdown of the normal "emergency control" mechanisms of the personality by an overwhelming trauma, and in therapy suggests the desensitization of the patient to the traumatic experience. Gillespie has considered some of the symptoms in the light of a "condi-

tioned response" to the noises of battle, especially the so-called "startle reaction" (starting, tremulousness, palpitation, and fear, on sudden noise). With this in mind, McLaughlin and Millar have used recordings of combat noises as an adjunct to psychotherapy of war neuroses, with reported good results. Kardiner has presented an extensive monograph based on the careful study of chronic cases from World War I, and has attempted to separate the group as an entirely different type of psychoneurosis, which he considers with the psychosomatic neuroses as "physioneuroses." He points out, as pathognomonic, repetitious catastrophic dreams, especially dreams in which essentially the traumatic situation, or a portion thereof, is re-enacted. Autonomic phenomena are common, as are psychosomatic complaints. The startle reaction is extremely frequent. As psychologically traumatic in origin, Kardiner groups a great variety of cases varying from anxiety states to schizophrenia and epilepsy, from a clinical point of view having in common only the listed symptoms, and the fact that each had its onset following a traumatic experience. For the chronic cases, suggested therapy is based primarily on a prolonged psychotherapeutic procedure, and removal of secondary gain from the neurosis by overhaul of the pension system. For the acute cases, rest, a sympathetic atmosphere, and the discharge of emotion from the traumatic situation are suggested. In Kardiner's opinion, the last should be accomplished at the conscious level by interview, rather than by abreaction under hypnosis as was commonly practiced in World War I.

A most valuable contribution to the literature from the World War II has been made by Sargant and Slater in an article on the "Acute War Neuroses" encountered following Dunkirk. Their cases demonstrated "that men of reasonably sound personality may break down if the strain is severe enough." They were of the opinion that while their cases may have had some predisposing constitutional factors in comparison with the average population, they nonetheless had made a satisfactory adaptation to army

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²The authors present this article to those doing the general work of the Navy with the idea of summarizing for those outside psychiatry certain facts concerning "war neuroses," so that they may be available for practical application. The work of others has been borrowed from freely; the experience is our own. The cases cited have been contributed by all the members of the neuropsychiatric staff of the Norfolk Naval Hospital, Portsmouth, Va., who should be recognized as coauthors: Lt. Comdr. S. M. Smith, W. B. Cline, L. A. Schwartz, and Lt. D. T. Dodge, all of the Medical Corps, U. S. Naval Reserve.

life, and the previous history indicated in most cases a man of normal intelligence, personality, and work record. The stress required to produce a break-down of such personalities was of an altogether different order from any to which they could expect to be subjected in ordinary life. The patients presented signs of marked physical exhaustion, and mental symptoms of "anxiety, sleeplessness, terrifying bad dreams, a feeling of inner unrest, and a tendency to be startled at the least noise." "The course taken by these patients under treatment was uniformly toward improvement."

By far the most significant publication for those dealing with these problems in a naval service, is the article by Margolin, Kubie, Kanzer, and Stone entitled "The Nature and Incidence of Acute Emotional Disturbances in Torpedoed Seamen of the Merchant Marine Who Are Continuing at Sea." A common type of acute neurotic reaction seen in land combat was not encountered in this study, i. e., the acute panics and stupor reactions, it appearing that these men did not survive the sinking of their ships. Even with such cases eliminated, the investigation met with persistent symptoms of some degree in 75 percent of the men examined, an inordinately high occurrence. Of these, only one third, or 25 percent of the total examined, showed sufficiently severe reactions to be disqualified for return to sea as psychoneurotic. Besides admitting that the number of men examined is small (40), the authors attempt to qualify the high incidence of emotional disturbances by pointing out certain predisposing factors in the personalities involved, in particular the psychological problems which had driven many of the subjects to the sea as a means of livelihood, and the improper and inadequate training which many of them had received for certain phases of combat duty. Nonetheless, the fact remains that in the first carefully conducted study of men subjected to the stresses of naval combat, a tremendous incidence of "neurotic" symptoms has been encountered.

The psychiatric screening program of the Navy will undoubtedly reduce the incidence of "neuroses" considerably over that reported above, but unfortunately no one has as yet been able to formulate any definite criteria for the rejection of men suspected of being predisposed to "traumatic neurosis." Symptoms occur inexplicably in men who by all concepts are well within the limits of normal personality. The most careful studies have not revealed a personality structure common to these multiple cases. What personal problem could 3 out of 4 men carry to produce the same or quite similar symptoms? Why, as reported by Love, do "individual infantry units of approximately equal standards of training and stress show notable divergencies in the number of neurotic casualties"?

Extremes of 1 case and 27 cases admitted from equal infantry units are reported. Is any group of men so maladjusted that it can produce 75 percent of its number with a neurotic syndrome? Under such circumstances the abnormal becomes the normal, and what at first glance appears pathological may at second clearly be physiological. It is our belief that the psychological mechanisms associated with "traumatic neurosis" are so fundamental as to be present in all men, and are of concern only in determining the extent of the neurotic response, not its content. As a corollary, the precipitating force lies in the personality's environment, hence to some extent is controllable. These are primary facts in preventive and curative therapy.

The ordinary psychiatric problems of peacetime occur regularly in the setting of war and take coloring from the combat situation, usually in the form of the cardinal symptoms of "war neurosis." These cases must be set aside in their own group; they are irrecoverable to the military service. Their backgrounds are those of the psychoneurotic; childhood insecurity, parental rejection, faulty inheritance, early evidence of maladjustment, and immaturity. In war they are curable exactly as are their peacetime counterparts. They require extensive and prolonged psychotherapy. As far as the Navy is concerned, they must be evacuated as rapidly as possible from combat areas and discharged from the naval service for therapy at the governmental agencies established for that purpose. In spite of their combat seasoning, it is difficult to classify them as "war neuroses," and in handling them the feeling is always present that the patient would have reached his current degree of disability under almost any environmental condition. Examples are given later on in this paper. Of especial interest to us is that under certain conditions, a profound psychoneurotic can pass through combat experience, show no handicap during action from his illness, emerge disabled by his psychoneurosis, but with no evidence of any "traumatic neurosis." The increased responsibility of a promotion may render such a man disabled after he has weathered combat experiences known to break others. It is in the separation of the psychoneurotics with traumatic coloring that the medical officer must be prepared to exhibit a great degree of diagnostic sensitivity.

The characteristic symptom of the "traumatic neurosis" is undoubtedly the "repitious catastrophic nightmare." In its absence the diagnosis is suspect. It usually reenacts the traumatic scene, or some portion thereof. It is always accompanied by a pathognomonic, childlike emotional pattern; the effect of fear persists even after awakening, so that the patient feels compelled to leave his bed, walk around, seek human companionship. In the adult this

combination of events is rarely met except in the "traumatic neurosis."

Closely following the nightmare in frequency is the "startle reaction." Sudden loud noises, by day or by night, produce in the unhappy victim a sudden start, accompanied by the physiological evidence of anxiety; tremor, dilated pupils, sweating, dry mouth, flushing or pallor, palpitation. Not infrequently, in the more acute stages, the startle reaction breaks over into actual panic; the patient runs for the nearest exit, or screams hysterically, or upsets nearby furniture, or stands transfixed laughing and crying uncontrollably. This panic is extremely contagious among other members of the ship's crew, and is the most generally disturbing external evidence of the war neurosis. One ship returning with the survivors of a torpedoed transport crew, unfortunately had a loose hatch cover over the living compartment in which they berthed. Each time a sudden movement of the ship caused the cover to slap, the entire group of survivors made a panicky start for the lifeboats, many from a comparatively sound sleep. Four of this group were admitted to this hospital immediately after arrival in the United States. It is because of this startle reaction that other ships find it extremely difficult to assimilate survivors of certain ships into their own crews. Five cases were admitted from such a ship after they developed acute panics during target practice. All were in different parts of the ship, from the bridge to the engine room, and their total effect was so disturbing that the commanding officer directed the medical officer, "For my sake, get them off of here."

Accompanying these symptoms is what has been described by Kubie as "a subtle personality change." The victims lose their cheeriness, become morose, silent, sullen, irritable, intolerant of noise or argument, withdrawn. Not infrequently they show a peculiar vacant staring expression that suggests the affectless facies of the schizophrenic. Alcohol is very commonly resorted to as a relief from the psychic torture which they endure. Because of their neurotic symptoms, many become disciplinary problems. A quiet, well behaved, although somewhat immature Marine aviator tells his colonel in no uncertain words where the latter can put his squadron of planes; a coxswain with 3 years of service, having never been on report, is A.W.O.L., and returns only when his family finds out he is not on leave, becomes worried over his mental symptoms and brings him back. The personality change is a subsidiary rather than a cardinal symptom, as the nightmare and startle reaction, and is the most variable feature of the illness. It may be scarcely noticeable, or it may be profound. It may be a symptom of "war neurosis," or it may in itself be indicative of a major psychoneurosis or psychosis.

Accompanying these symptoms frequently is a fourth clinical manifestation which is not essential for the diagnosis, but is extremely common, a guilt reaction with emotional depression. As noted by Kubie, "Perhaps the worst situation occurs whenever a group of men are trapped in a spot from which only a few can escape. Escape from such a predicament leaves the survivors haunted by the memory of those who were left behind, with a sense of guilt as great as if they had murdered them." In lesser degree, this feeling of guilt, with its consequent emotional tone of depression, occurs in many survivors of disasters in which a number of the original group were lost, regardless of the circumstances of survival. The higher the percentage of the original group that is lost, the greater is the possibility of the appearance of guilt in the survivors, and on occasions the guilt appears to be lessened to some degree by hardships which may have been endured to survive. In addition to revealing itself in depression, the sense of guilt leads to protestations that nothing could have been done by anybody for those who were lost, and to the survivor's careful exposition of his own efforts to save others.

We believe that the traumatically determined emotional disturbance in itself goes no further than these symptoms; beyond lies the true psychoneurotic, easily diagnosed by longitudinal history. In the presence of conversion hysteria, marked free anxiety, enurosthenia, compulsions, and obsessions, or psychosomatic manifestations in the cardiovascular, gastro-intestinal, or other organ systems, we have invariably found one of the classical psychoneuroses.

For our purposes, then, we have established four arbitrary criteria for the diagnosis of "war neurosis," or "combat fatigue":

1. *A stable personality prior to appearance of the traumatically determined emotional disturbance.*—There should be no objective evidence of maladjustment in childhood or adolescence. Walking, talking, habit forming, should have occurred at about the usual age. The school and work record should indicate stability, without undue disciplinary problems having arisen, without frequent changes in employment, without undue conflict with civil authorities, without unusual revolt against parental discipline. A normal heterosexual adjustment should have been reached if the patient is of sufficient age. In this respect, medical officers are warned against paying too much attention to minor variations, except after comparing these rigidly with the personality traits of men similar in age and background to the one under study. Cultural differences of various parts of the country must be recognized in this connection.

2. *A combat experience of sufficient intensity to render*

it feasible as a precipitating agent.—The mere threat of combat is not enough to produce neurotic symptoms in men other than those specifically predisposed, i. e., the psychoneurotics. The combat experience should be examined carefully in its relation to the patient; there is no direct relationship between the severity of the experience and the severity of symptoms. Here the personality of the individual undoubtedly contributes to the picture, in the amount of reaction produced by a stimulus. Thus, a boy rejected by his father in childhood will be much more profoundly affected by the loss of a superior petty officer or officer whom he has accepted as a father substitute than would a shipmate, otherwise similar, who had needed no such substitute. The environmental setting should be examined with particular care, with special reference to certain contributing factors such as what did the patient think of his officers, how well did he know his job, how well did he know his shipmates, what were his relations with the human beings around him and with his ship, and how much did he suffer with physical fatigue.

3. *Objective evidence of subjective anxiety.*—The patient suffering with war neurosis does not discuss his combat experience with equanimity. He sweats, he trembles, he flushes or pales, he swallows frequently, he smokes incessantly. No malingerer can imitate successfully the delicate timing of the physiological effects of anxiety. When the battle description rolls out smoothly, search more carefully for a psychoneurosis or a psychosis.

4. *Recoverability.*—It is our belief that all true "war neuroses" will recover in a comparatively short period of time with even relatively superficial therapy. When symptoms persist in disabling degree beyond 2 months under treatment, either the treatment is not adequate, or the psychoneurosis is not simply "combat fatigue" and has its roots in a deep-seated emotional conflict which long antedated the traumatic experience. By recovery, we mean the disappearance of nightmares, startle reaction, and the symptoms of personality change previously mentioned. Objective evidence of anxiety disappears from the combat discussion. These people are extremely sensitive to war movies reproducing battle scenes and sounds; so much so that the sensitivity can be used in differential diagnosis, and as evidence of recovery. When such a patient can sit through actual combat scenes in the movie, without feeling anxiety or tension, without having to leave or feeling unduly restless, without feeling depressed afterward, and without resultant dreams, he may be considered fully recovered from the traumatic experience. This testing must be used carefully; the sensitivity to movies persists long after all other symptoms have subsided. One of our patients had over 5 years in the Navy, in spite of having

walked in his sleep on many occasions in his life, at least nine times after enlistment. Following the sinking of his ship in June 1942 he suffered with nightmares and startle reaction for a period of 6 weeks, but did not seek medical care. In February 1943, long after the subsidence of all his symptoms, and his apparent complete rehabilitation to the service, he attended the war movie "In Which We Serve." He felt depressed and restless afterward, and that night his "catastrophic nightmare" recurred for the first time in 7 months. He arose from his bunk, asleep, and actually abandoned ship by leaping over the side. He later stated with some humor that he awakened in mid-air, but it was too late to go back.

When these criteria are satisfied, we deal with a group of patients who may be saved for further military duty, although their reaction to combat, even after recovery, may preclude their return to actual line duties at sea. The war is yet too young for adequate statistics to govern the complete handling in these cases, but it is believed that even relatively severe cases which do not go beyond the stated boundaries will adjust adequately to limited duty, and eventually probably will be able to endure actual combat. We know that even the mild cases must be given a period of time in which to "digest" the emotional trauma incurred before again being exposed to combat conditions; repeated traumatic experiences at too short an interval increase the severity of the ultimate disability.

In the etiology of the "traumatic neurosis," the personality, as has been stated, is chiefly of importance in determining the severity of the neurotic symptoms under a given stimulus. In this connection we find two personality types, diametrically opposed to one another, which appear to be of greatest importance in predisposition and which suggest a bad prognosis. These are the emotionally and intellectually immature persons, with a great deal of dependence, and at the other end of the scale, the fully matured, independent older men. While there is no direct correlation between chronological age and emotional maturity, the personalities usually associated with age below 18, and above 38, comprise this group which appear to be particularly susceptible to the combat situation. It is not meant that those in the intermediate groups are not susceptible, or that these types inevitably suffer traumatic neurosis. Other factors being equal, the younger and the older men are the most disturbed emotionally by combat, and recover more slowly.

Of more direct importance in the production of symptoms is the setting of interpersonal relationships in which the traumatic event occurs. In the patients' own stories of the precipitation of neurosis four factors have occurred, singly or grouped, in too great frequency to be ignored:

1. *The patient entered combat without faith and confidence in his leader.*—This may be petty officer, commissioned officer, commanding officer, division commander, force commander, or higher, depending on the rank and duties of the victim. This arises from any one of several situations. The superior may be incompetent, or being competent, may have given the impression of incompetency of his juniors. The important point is not the actual ability of the superior, but the junior's estimate of his ability. The leader may have held his position for such a short period of time before combat that his juniors are uncertain and in doubt as to his ability; on the other hand, he may, through familiarity with his troops, have exposed his normal weaknesses in extramilitary matters, thus casting doubt in the minds of those under him on his ability to command. It is this latter possibility which makes urgently necessary the restraint of normal personal relationships between officers and the men who will serve under them in combat. Any incident which strengthens faith in the leader lessens the occurrence of neurotic symptoms, hence a winning army or a winning ship produces fewer cases than one which loses. A ship which has given a good account of herself, even though finally sunk, leaves a less emotionally disturbed group of survivors. Similarly, loss of faith in leadership, even after combat, may produce symptoms based on the previous traumatic experience. Thus a yeoman who survived the sinking of a combatant ship under extremely traumatic personal circumstances (personally witnessed loss of close friends, great danger to self, and long hours in the water) had no reaction noticeable to himself more than mild startle response until he began to prepare the reports of the engagement. He then discovered that mistakes had been made in the conduct of the engagement, and immediately developed nightmares, restlessness, and anxiety in response to noise.

From the standpoint of the patient, his lack of faith may arise from his own considerable ability as compared with the lack of experience and youth of the officers under whom he serves. This may account to some extent for the predisposition contributed by age; with greater maturity greater value is placed on life, there is less belief in the infallibility of humans, a more critical perceptive toward all is adopted. The rapid expansion of the Navy may give us many ships in which the officers are of less experience and younger than many of their crew, a potentially dangerous situation psychologically.

2. *The patient was insufficiently trained, did not know his job or his ship as thoroughly as he should.*—Careful and adequate training is of the utmost importance in prevention of war neurosis. All observers agree that in the heat of battle men react at an automatic level; they do

what they have been taught to do, and nothing else. When a gun platform was on fire, ammunition handlers who had been trained to overboard ready ammunition in case of fire continued to dispose of it properly even when the men about them were blown to bits performing the same duty. At least some of the patchy amnesias for combat details are due to an attention defect at the time, rather than to active repression of unpleasant memories. Such amnesias, when the events are recovered, reveal themselves as of no particular importance to the patient or his illness. It appears that complete training will greatly reduce the incidence of acute psychiatric casualties during combat, as well as more protracted illnesses later. Fear reactions are much less common in those performing duties they know well, even though the duties themselves may not provide an outlet for aggression or the normal anxiety experienced under fire. This has been noted by others, and Sargent quotes a high military authority as stating that, "Shell shock is nothing but insufficient training."

3. *The patient entered combat surrounded by new shipmates, men who were comparative strangers to him, and whose conduct under fire he had not had time to estimate.*—In this respect a man is between two fires; if he is among close friends of long acquaintance, he is emotionally wrung by witnessing their maiming and destruction; if he is among new shipmates his own sense of personal danger is greatly enhanced. The latter situation is the more intolerable to him. Ships with hurriedly assembled crews, or with high percentages of new men on board, may be expected to contribute an unduly high number of "war neuroses."

4. *The patient experienced the combat situation when he was suffering with marked physical fatigue.*—The outstanding role of fatigue in all these syndromes has been recognized and stressed by each investigator of the subject. Whatever the usual mechanisms of defense against this type of emotional disturbance, it is certain that they are weakened and reduced by prolonged physical exertion, hunger, exposure, lack of sleep, irregular habits. Fatigue is particularly important in land troops; the men of naval forces are more apt to have some opportunity for rest between engagements. Such rest, however, may be broken by general alarms, drills, abortive attacks, and so on, so that it falls considerably short of true rest. "War neurosis" may be expected much more commonly among land troops, but conversely, such symptoms as occur may be expected to respond much more readily to simple rest. Fatigue has been such a prominent part of the etiological background of these cases, that it has been suggested as an alternate name for this syndrome which scarcely qualifies for the diagnostic title of "neurosis."

We are not prepared to say just why the above factors produce symptoms. Complete analysis of a number of such cases would undoubtedly reveal certain fundamental psychological mechanisms through which the symptoms are produced. It is our belief, however, than any such psychological mechanisms as exist are common to a great majority of men, that their eradication is impossible, and that therefore, their importance can be minimized in the prevention and treatment of "war neurosis" in the present state of our knowledge. We believe that the four factors delineated above can be controlled to some extent, and thus utilized in the prevention of "war neurosis" or combat fatigue.

Two other observations concerning etiology, especially important therapeutically, are the facts that: (1) Difficulty in returning a patient to combat duty is increased in direct proportion to the distance from the front to which the patient has been evacuated, and (2) all symptoms are liable to aggravation in the presence of loved ones; friends, relatives, spouse, family. In the latter situation, the traumatic anxiety and concomitant disturbances are particularly apt to attach themselves to the emotional ramifications of family life and become irreparably fixed. A patient who suffered with nightmares of some degree, and moderate startle reaction, found it unnecessary to consult a physician concerning them for 3 months after the sinking of his ship. During this period he was busily engaged in the affairs surrounding decommissioning of the ship and was quite able to handle his nervous reactions without outside aid and without undue concern on his part. Immediately following his return home on survivor's leave, 3 months after the sinking, he was met with newspaper publicity, innumerable calls from the families of other men from the same town who had been on his ship, and within 24 hours was suffering such attacks of anxiety that he called his family physician for examination. In this particular case, the man was especially foresighted in that he returned at once to naval command when his physician informed him that he probably had "heart trouble." The efficacy of therapy is shown in the fact that he now is back on limited active duty, in spite of receiving only the most superficial sort of treatment. Less fortunate patients remain in the vicinity of their families, and may easily ripen their transient symptoms into a full-blown psychoneurosis in the misguided warmth of love.

It is extremely difficult for those accustomed to working with psychoneuroses to consider the "war neurosis," as delineated herein, a true neurosis. The occurrence of psychoneurotic symptoms in an otherwise stable and non-neurotic personality is a remarkable and striking phenomenon, one which will bear careful study and observation.

This collected group of symptoms does not occur in isolated form in the personality; they may be incorporated with underlying emotional conflict to form any gradation of a true psychoneurosis, with fundamental mental deficiency to produce a bizarre picture, with an incipient psychosis of either the affective or schizophrenic type, actually even with organic brain damage or with epilepsy. It is this incorporation, however, which produces the wide variety of response to combat conditions, and not the traumatic emotional disturbance itself. The universality of the picture, the stereotypy of the symptom response, the extremely shallow depth of the uncomplicated cases, the absence of previous marked emotional disorder in so many victims of "war neurosis," all suggest that here we are dealing with something quite different from the usual psychoneurosis. Names such as "war neurosis," "traumatic neurosis," "traumatophobia," all suggest the alliance with classical neuroses which we do not believe exists directly. It has been suggested that the term "combat fatigue" be applied to the uncomplicated syndrome. This title carries with it no connotation of emotional instability or of future recurrence, and would seem to be the best of names suggested thus far, although actually the fatigue of combat is only one of the several factors involved in the production of symptoms. Those cases which develop complicating symptoms of conversion, anxiety, compulsion, epilepsy, or what not, should be called by their proper diagnostic titles of psychoneurosis (hysteria or other), for that is what they are, and in them the combat is only an incident. We cannot stress too much that in these complicated cases presenting secondary signs, the treatment, prognosis, and disposition are exactly the same as for the same disability occurring in a peacetime setting, except as they be altered by the secondary gain possible (under the pension system) to any disability occurring during war.

Before entering into a discussion of therapy, the following illustrative cases of combat fatigue, with its complications and differential diagnosis, are presented.

CASE REPORTS

Case 1.—This 24-year-old patient, a boatswain's mate, first class, who had 1 year and 2 months active duty in the United States Naval Reserve was admitted to the hospital for neurological examination when he complained of slight weakness of the left shoulder and was observed to have wasting of the suprascapular muscles.

The patient is a tall handsome young man, the eldest son of a sound middle-class family, which had always been secure financially. Although an indifferent student at a large city high school, he was outstanding athletically as a prominent member of the football, baseball, basketball, and swimming teams. After leaving school he held several positions of a minor nature, though performing satisfactory work, and in addition served 2 years in

the United States Navy, receiving a disciplinary discharge in 1940, which he deliberately incurred at his family's urging. The patient subsequently married and is happy at home with his wife and child.

He served on cargo and transport ships in the Pacific prior to the opening of the North African campaign and was twice officially commended for meritorious duty during this period. During his duty in the Atlantic he witnessed a tanker explode and was upset in noticing mangled bodies sweeping past his ship. He was transferred to another ship shortly before the North African invasion. After the original landing on the North African coast the patient injured his shoulder during a fall while diving into a foxhole as the enemy planes strafed the beach. He was then exposed to the sight of his friend who had been mutilated by the loss of his leg during this engagement, and later witnessed the sinking of four transports and the narrow escape of his own ship following a submarine torpedo attack. He returned to this country, continuing on duty at his own request although suffering terrifying nightmares recapitulating his war experiences and becoming unusually alarmed and apprehensive when exposed to previously innocuous sounds. His wife noticed his sensitivity and his unwillingness to attend cinemas that depicted combat scenes but at no time did he consider his symptoms sufficiently severe to necessitate medical aid. They were only elicited by direct questioning during the neurological examination. The patient was found to present atrophy and weakness of the muscles supplied by the suprascapular nerve as well as a costochondral dislocation of the first left rib. He declared that the psychological symptoms mentioned before had become less disturbing and less frequent during the previous 3 months.

Following 4-weeks' treatment for the injury to the shoulder the patient was returned to duty. At no time during the period of hospital observation was he observed as restless, agitated, sleepless, or apprehensive.

Comment.—This previously stable 24-year-old man developed fleeting restlessness, nightmares, and sensitivity to otherwise innocuous sounds following his exposure to combat. The symptoms were never disabling and had, according to his own statement, subsided in frequency and intensity during the intervening 3 months. This type of mild disturbance rarely arrives in hospital and can be handled easily aboard ship if recognized.

Case 2.—This 18-year-old radioman had 1 year and 3 months service in the United States Navy prior to his admission to the hospital with symptoms of anxiety and depression.

The patient is the youngest son in a happy artisan family of four children. He was the favored child but throughout his early life gave no indication of instability. At school he was an average student and later was president of his high-school class and an outstanding football player. At the outbreak of war, he enlisted in the naval service with the consent of his parents, and immediately after completing his recruit training was detailed aboard a destroyer where the morale was high. He made many close friends and with personal assistance of the communications officer, who helped him with the radio work, made a rapid advancement in rate.

The destroyer was part of the screen of an aircraft carrier engaged in the Coral Sea Battle, the raid on the Gilbert and Marshall Islands, and later the Battle of Midway. At the onset of each engagement the patient felt apprehensive but once firing commenced he became entirely composed and attentive to his duties. While the destroyer was lying alongside a stricken air-

craft carrier following a bombing attack during the Battle of Midway, June 1942, the patient heard the warning of "torpedo wakes." He was then sitting alone in the emergency radio room aft, arose, saw the white wakes approaching the ship, resumed his post until suddenly thrown out of his seat when the torpedo exploded beneath him. He ran from the shack, cut down some life rafts, plunged overboard and swam rapidly away from the ship. As the depth charges of the sinking ship exploded he was dazed and coughed up blood. He reached a nearby raft, which was later evacuated by another destroyer. He was then cognizant that his best friend, his immediate chief, and the communications officer, had all been killed. On being taken aboard the ship he collapsed. Following his return to the naval base, it was learned that he had suffered blast injury to the chest and abdomen which eventually necessitated intestinal resection. During convalescence from this operation he first had terrifying nightmares in which various scenes related to the sinking of the destroyer were continually repeated, and which awakened him in a state of anxiety. Sudden noises also produced unusual apprehension. He felt fatigued and tired, but on his return to the mainland was well enough to request return to duty in spite of the symptoms, and to marry 4 months after the injury. His wife, a young irresponsible girl, resented his desire to remain home, deserted him within the month and was found to be unfaithful. This precipitated a depression with acute anxiety, preoccupation with his combat experiences, his marriage, and worry over pains in the operative scar, loss of appetite and insomnia. An attempt to annul the marriage failed and as he was unable to obtain leave he went A. W. O. L. in order to contact his family and obtain their help. When the patient turned himself in at the receiving station his emotional disturbance was noted and he was transferred to this hospital.

He was admitted to the medical service on January 29, 1943. There was no evidence of physical disease but his insomnia, anorexia, constipation, and fatigue were observed and psychiatric study was requested. The patient was listless, dejected, and emotionally labile. Discussion of his battle experiences was distressing to him and he described in detail his sensitivity to sounds and various combat scenes in motion pictures. The latter stimulus invariably led to anxiety. After 1 month of treatment on the psychiatric service, assistance in correcting his marital affair, and reassurance concerning the disciplinary measures to be taken against him, improvement was noted. He was more energetic, content, slept well, commenced to eat, gained some weight, and again desired to return to duty. Nightmares were infrequent, he was again able to attend movies and sounds were less disturbing to him. It was possible for him to describe his war experiences without tension. A Board of Medical Survey recommended his return to limited active duty for a period of no less than 6 months following his discharge from the hospital, under the diagnosis of combat fatigue.

Comment.—This previously stable adolescent, with a long period of service aboard a combatant ship, developed catastrophic nightmares, "startle," and fatigue, as well as severe blast injuries to the chest and abdomen, following the torpedoing of his ship. The psychological symptoms were aggravated following his rejection by his wife and were then complicated by depression, anxiety, restlessness, and resulted in his first breach of regulations.

Case 3.—This 24-year-old lieutenant had 1 year and 16 days active duty in the United States Marine Corps prior to his ad-

mission to this hospital for study concerning an "emotional instability."

At birth he lost his mother and was placed in the hands of an aggressive but affectionate aunt and a colorless uncle. As the only child in the home he was pampered and spoiled, but at the age of 18 years decided to return to his very successful father, who had meanwhile married and had two children by his second wife. The readjustment was difficult but successful; at first he felt resentment toward his stepmother, who seemed unduly critical and appeared to discriminate against him. He entered college in accordance with his father's wish. He pursued a dilatory course, though active in athletics and social affairs. However, on the side, he methodically and conscientiously carried out a research program for a chemical company as a means of obtaining funds for himself.

The patient left college to enter Marine Corps aviation when the opportunity presented. He had had over 200 flight hours prior to his transfer to a Pacific island base in April of 1942. There, due to equipment limitations, the group obtained only a few hours flight per month and did not have the opportunity of combat practice as a unit. He was quartered with, and became unusually close to, his commanding officer. The patient was a member of the dive bomber unit attacking the Japanese fleet in June. His oldest companions in the squadron were shot down in flames before his eyes, his commander and a large proportion of the squadron were lost. He put his bomb on an aircraft carrier before returning to base and then was exposed to shelling by a submarine during the following night. Shortly after the return of the survivors, both he and his surviving squadron mates presented evidence of an intense emotional reaction. He was restless, tense, irritable, and unable to sleep. At night he repeatedly recapitulated the horrifying combat experience in dreams and during the day was unduly upset by sounds reminiscent of bombing. He commenced to drink, was morose, reticent, and irresponsible, and ignored the usual courtesies given senior officers. His confidence in his flying ability disappeared, he was fearful of killing himself or others, and repeatedly considered various schemes for self-injury in order to escape from the distressing situation. Following a rebuke by his commanding officer, after collision of a plane in his three-plane section with an Army plane, his anxiety became so marked that he demanded to be transferred to an Infantry company. In rapid succession he received three changes of station in the succeeding 4 months, finally ending in an Infantry company. These transfers served further to undermine his security; he believed from comments made that an effort was being made to oust him from the corps.

On admission to the hospital he was anxious, restless, overactive, and sleeping poorly. He had feelings of guilt and was sheepish over a recent award of the Navy Cross. He stated that he was unable to attend movies containing battle scenes. "The first thing you know, you are right up there in it." Under treatment the patient regained his composure, was again affable, enthusiastic, assured, and pleasant. The nightmares subsided, startle was less pronounced, he was able to attend movies, resumed aviation gunnery practice, and repeatedly expressed his desire to return to aviation though not certain of his ability to perform as a fighter pilot. Accordingly after 3 months he was brought before a Board of Medical Survey and recommended for return to limited active duty with ground aviation for a minimum of 6 months prior to reconsideration for flight duties. The diagnosis was combat fatigue.

Comment.—This rather immature lieutenant, previously without symptoms of emotional instability, with an inadequate training period prior to a dive bombing attack in which his commanding officer was killed, developed nightmares, anxiety, response to startle or to recapitulations of combat scenes in movies, and a personality change characterized by morose irritability, alcoholism, irresponsibility, insecurity, and lack of confidence. The symptoms were aggravated by the undermining influences of a rapidly changing environment and of an unsympathetic, misunderstanding attitude of both medical and line officers who contacted him following the combat experience.

Case 4.—This 17-year-old seaman had 7 months' active duty prior to his admission to the hospital with an undetermined diagnosis of intracranial injury.

He is the third of four boys in a family of six. His father is a "shell-shocked" veteran of World War I, now alcoholic and a chronic complainer. The mother is migrainous. The home was kept discordant by parental quarrels; nevertheless, the patient, though of retiring and quiet nature, adjusted well at school, was accepted by his classmates, and was not considered temperamentally unstable.

Following his enlistment in the naval service, he received 3 weeks basic training and was detailed aboard a transport for drill in amphibious operations. The patient had hoped for duty aboard a combat ship of the line. Three weeks prior to the departure of the convoys for the North African engagement, he was transferred to another ship. There he was barely acquainted with his new shipmates when the engagement opened. His immediate chief was regarded by him with little respect as an "old man." The seaman was extremely apprehensive as his landing boat approached the beach during the opening operations, but quickly regained composure when not exposed to fire. The following day he was frightened to the point of believing his legs were paralyzed when an enemy plane strafed the ship and he threw himself on the deck. The fourth day the ship was suddenly torpedoed. He was blown against the bulkhead and struck his head, but was not injured and quickly climbed down a net into a tank lighter below. While throwing out lines to men struggling in the water he was fascinated by their cries and amazed to see some cast aside their life jackets. After helping one man aboard the patient felt so weak that he lay upon the deck and later had to be assisted ashore. The following day a plane killed a French woman in town and he morbidly examined her body and the leg wounds of a sailor wounded in the same raid. He then realized how tense and anxious he felt, and in the following weeks had difficulty in sleeping, being repeatedly awakened by dreams in which his ship was torpedoed or he was shot in the leg. While aboard the transport returning home, he and the men in his division were quartered in a forward compartment. During a prolonged storm the group repeatedly rushed to the boat deck in panic when a loose hatch cover slammed above them. He was given a 30-day leave after arriving in this country but the change in his personality was so conspicuous to his family that his mother shortly sought medical advice concerning his symptoms.

On return to duty the patient complained of headaches and dizziness, and was transferred to this hospital for study. As there was no evidence of organic disease, psychiatric examination was requested. His extreme restlessness, amounting to agitation, his inattentiveness and irritability were immediately apparent. He was unable to concentrate, expressed death fears, and

presented the history of nightmares and sensitivity to sounds reminiscent of combat. His sleep was broken almost nightly by terrifying dreams. With sedation and psychotherapy there was some diminution in the restlessness, the insomnia, and his response to startle. He put on weight, but continued to complain and insisted upon his inability to return to duty. It was evident that he would not again adjust in the service. On a mental test he attained an intelligence quotient of only 69. Accordingly, he was brought before a Board of Medical Survey and recommended for discharge under the diagnosis of psychoneurosis, anxiety neurosis, incurred in the line of duty.

Comment.—This dependent, youthful seaman, with a dull mentality, who was raised in a discordant home by a neurotic, alcoholic father and a highstrung mother, presented no evidence of emotional instability prior to his traumatic combat experience. He then developed nightmares, startle, and a personality change marked by agitation, anxiety, and preoccupation, with the complaints of headaches and dizziness. The case study illustrates the importance of a psychopathic background, and the contributing factors of inadequate training, indifference to leadership, and low morale. The repeated panics during the voyage home have probably further served to deepen the patient's anxiety by the process of conditioning.

Case 5.—This 28-year-old corporal had 2 years and 4 months service in the United States Marine Corps prior to his admission to this hospital.

He is the youngest of five children. The brother now is in the naval service and the three sisters are married. The father is a successful Illinois farmer, the mother suffers hypertension and is irritable and fretful. The patient is his mother's favorite. His childhood was not unusual; he completed grade school at 15 with an average record and worked steadily as a laborer or a farmer until his enlistment in the Marine Corps. His sexual life has been promiscuous and he has not married. A review of his health record showed that the patient had requested medical study on June 13, 1941, following three acute attacks of palpitation associated with vague apprehension of death. As no medical cause could be discovered for his symptoms he was returned to duty with the statement that the complaints were regarded as "functional in origin." Sedatives were prescribed for treatment.

The patient was a member of a Marine unit at the time that the Japanese attacked Pearl Harbor. As he and members of his company were leaving the mess hall they observed some planes dropping torpedoes and thought that they were witnessing a sham maneuver until explosions took place and the planes commenced to strafe the fields. The patient, with some companions, immediately rushed to a storeroom, broke out a machine gun, mounted it near the hospital, and manned the gun during the succeeding attack. He witnessed the explosion of the U. S. S. *Arizona*, saw men in his company shot down by the strafing planes, and was later nauseated as the burned and maimed were carried into the nearby hospital. For the next 36 hours his company was busy preparing and manning machine gun positions upon the beach while awaiting an expected invasion. The company was kept active for a period of 3 weeks and as the tension decreased the patient developed anxiety, was unable to sleep well, commenced to have nightmares which awakened him in extreme apprehension with palpitation, choking, and dyspnea. Following exposure to any sharp sound suggestive of an air raid he felt weak, sick, tremulous, and perspired freely. He

made no complaint and continued duty. As his symptoms persisted for months after his evacuation to this country he became morose, irritable, restless, depressed, and fearful of developing a "nervous breakdown." For this reason, the patient sought medical advice in October 1942, 10 months after his combat experience.

On admission to the hospital there was no evidence of physical disease. He was conspicuously restless, tense, anxious, resentful and irritable, and easily startled by slight sounds. Careful observations of his sleep disclosed that he had difficulty initiating sleep and then frequently awoke during the night. The patient was unwilling to discuss his experience at Pearl Harbor though induced to give a chronological account of his activities. He was thought to be actively repressing certain of his experiences and never produced dream content.

With psychotherapy and sedation, he became more composed, was able to perform simple details about the hospital compound, gained weight, slept soundly, and conversed with ease on other subjects than his battle experience. This subject immediately aroused his anxiety, and he became irritable, anxious, flushed, and excited. In spite of continuous treatment over a period of 3 months his improvement was considered insufficient to allow his return to even limited duty. Therefore a Board of Medical Survey recommended his discharge under the diagnosis of psychoneurosis, anxiety neurosis, considered to have been incurred in the line of duty.

Comment.—This patient was observed to suffer anxiety seizures many months prior to the outbreak of war. His single battle experience, coming as a surprise and without adequate preparation, resulted in aggravation of this already established neurosis and complicated it by engrafting thereupon a "startle" response to sound and a mild depressive reaction.

Case 6.—This 21-year-old seaman had 7 months' service prior to his admission to this hospital with the complaints of weakness of his legs, nervousness, poor appetite, and inability to sleep.

The patient is one of a large family, of Italian immigrant parentage. Throughout his adolescence he considered himself physically weak and unfit for strenuous physical effort such as athletics. He was a sensitive, retiring individual, and worried about a severe case of acne. Due to his pallid complexion, he thought he had anemia. In the year previous to his enlistment he had attempted to work as a fisherman but after twice suffering severe fright following falls into the sea, gave up this occupation.

On enlistment in the naval service, he was selected for further study by the psychiatrist at the naval training station due to his conspicuous insecurity, but was sent to duty after the receipt of an innocuous social service report. He was then assigned to the Amphibious Force when his recruit training was complete, and was placed aboard a transport. There he repeatedly visited sick call with such complaints as weakness, tension, fatigue, diarrhea, and vomiting, and was actually in bed during the days before his ship approached the North African coast during the original landing operations in November of 1942. The patient however served as a coxswain for one of the landing boats. His transport was torpedoed on the fourth day after the first landing. He immediately went overboard, swam about supported by a life jacket, and was shortly picked up by a barge. No sooner was he grasped than he collapsed, had to be pulled aboard, and was still unable to support himself upon his legs when put ashore several hours

later. He was one of the members of the division that was placed in the forward hold of a returning transport where the men repeatedly rushed to the boat deck in panic when a loose hatch cover slammed and led them to fear another torpedoing.

Shortly after his return to this country he was admitted to the hospital with the diagnosis of anemia and the symptoms mentioned above. As there was no clinical evidence of anemia he was returned to duty 14 days later. The patient then received a 31-day survivor leave, but on return to duty complained of weakness of his legs and fatigue. In view of these complaints he was readmitted following interview with a psychiatrist, who regarded the patient as of long standing neurotic make-up and did not consider that his combat experience had aggravated his condition. It is of interest that the patient denied nightmares, was not restless or unduly anxious when exposed to sharp sounds. In spite of treatment and observation over a 2-month period, his complaints persisted and the patient was therefore recommended for discharge from the service by a Board of Medical Survey under the diagnosis of constitutional psychopathic state, emotional instability, which was considered to have existed prior to enlistment.

Comment.—This patient, in spite of a long-standing neurotic complaint, was capable of performing his duties during combat operations but did not develop any of the symptoms of the traumatic state, though exposed to considerable stress. However, following the sinking of his ship, his exposure to combat, and his return to this country, he reproduced the neurotic symptoms that had previously preoccupied him.

Case 7.—This 20-year-old patient, a seaman, second class, had 5 months and 7 days active duty in the United States Naval Reserve prior to his admission to this hospital.

He is the second of five children, the eldest of the three boys. His father is a laborer. As a child the patient was shy and retiring, was unusually sensitive to teasing, had nightmares and walked in his sleep until the age of 12 years, and was enuretic until 9 years old. Following the death of his father, the patient, then 9 years old, fainted after developing palpitation, precordial distress, weakness, and a feeling of anxiety. These symptoms have recurred throughout the intervening years whenever he has been exposed to the stress of frustrating situations. He did poorly in school, with four grade failures, and then accepted employment irregularly. He has since been intermittently alcoholic, always dependent upon his mother, and now upon his wife, for security.

He was detailed to a fast minesweeper after 3 weeks training. Two months later the patient was engaged in the landing operations along the North African coast. The patient was posted as lookout. As the ship approached the coast it was greeted by some gunfire and he saw shells splash in the water several hundred yards away. His heart commenced to pound, the precordial heaviness recurred, and his legs felt weak. He sat down on the deck, thus deserting his post and allowing the other men to carry on without him. As the ship was exposed to no other gunfire and had an otherwise uneventful trip the patient presented no further symptoms until after the return voyage to the United States. Then he had another similar attack while lying in his bunk in a crowded section of the ship, and due to his obvious discomfort, with complaints relating to his abdomen and chest, he was transferred to this hospital for medical observation.

In the hospital, he presented the history and symptoms recorded above, declared that he was unable to adjust in crowds

or noisy situations, and was preoccupied with worry concerning his wife, a chronic invalid. The physical, neurological, and laboratory studies failed to reveal evidence of organic disease but a social service report confirmed the history presented by the patient and further stated that he had "been ill all his life." A test of his mental ability showed that he had an intelligence quotient of 73. Accordingly he was brought before a Board of Medical Survey and recommended for discharge under the diagnosis of constitutional psychopathic state, inadequate personality.

Comment.—This 20-year-old patient with a border-line mental defect and a long history of insecurity and general inadequacy had for many years been preoccupied with somatic complaints relating to his heart which had been recurrently noted in emotionally distressing situations. This neurotic complaint caused him to desert his post aboard ship at the onset of battle operations but fortunately this act did not result in serious consequences to others. At no time was he exposed to a combat situation sufficient to produce combat fatigue.

Case 8.—This 31-year-old ensign had 7 months and 21 days active duty in the United States Naval Reserve prior to his admission to the hospital with a simple fracture of the twelfth dorsal vertebra.

He is the only son of a successful, energetic, and righteous businessman, and was happily brought up by his stepmother after his mother lost her life when the patient was 6 years of age. An average student at school, he entered the merchant marine at the age of 17 years and had worked his way to a first officer's license by the time he was 25 years. Then the patient married and accepted a position ashore as a foreman of stevedore gangs. In 1938, while at this job, he became depressed, slept poorly, had feelings of inadequacy, felt excessively fatigued, and experienced crying spells throughout a period of 12 months. He did not seek medical care, and blamed his mood disturbance entirely upon overwork and the type of people with whom he had to associate. He quickly recovered after impulsively quitting this job, and was performing in a highly successful manner as a salesman when he reenlisted in the United States Naval Reserve. His previous commission had been canceled at the time he discontinued going to sea.

The patient was immediately placed aboard an armed transport and in spite of his junior rank was given considerable responsibility because of his previous experience at sea. He was the assistant to the executive officer, stood senior watches, arranged battle drill, and was placed in charge of the after 5-inch gun. In August of 1942, while the ship was running trials, he again felt run-down and fatigued, and was at times so depressed that he had uncontrollable weeping spells. For this reason, he spent a full week in bed in the sickbay. Nevertheless, he resumed his duties when the ship joined the North African invasion fleet. Early one morning, nearing the African coast, the ship was struck by a torpedo which exploded the after magazine, wrecked his gun, and threw him into the air some 15 feet. In spite of fracturing his back, he ordered his men to another gun, and painfully dragged himself into the wrecked compartment below, from which steam was escaping and where he heard the cries of injured men. There he was shocked by contact with the mangled and dismembered bodies of his own men. A half hour later the patient entered the sickbay in shock secondary to the back injury but recovered quickly and was again at his post 2 days later. Throughout the succeeding 3 weeks the ship was bombed daily by planes, and eventually was thrown upon the rocks dur-

ing a severe storm. The repeated calls to general quarters, the fear of sinking, loss of sleep, and continuous responsibility led to deepening depression, and restless sleep. He began to dream of bombing and sinkings, of general quarters alarm, and frequently awakened with a start. There was a recurrence of an anxiety nightmare that he had in childhood. Sharp sounds led to acute anxiety. Following his eventual collapse from the excruciating pain in his back, and the x-ray discovery of the fracture 3 weeks after the injury, he was evacuated to this country. While aboard the returning transport the patient learned that the men on this ship were not stationed in the magazine in the manner that he had arranged for his crews. The already existing guilt feelings concerning the death of his men were magnified.

The return to this country was first followed by relief, but shortly after his admission to this hospital he again felt tense, fearful, apprehensive, depressed, and insomniac, and the nightmares recurred. He was anxious when planes flew overhead or when sirens or whistles were heard, and was unable to attend movies due to his self-identification with the actors. In particular, he plunged himself into the movie, "Caught in the Draft," and instead of laughing at this comedy, left, tortured by the fear of the hero who was to be forced into gunfire. He was self-accusatory, declared himself a coward, and expressed a hatred of the sea and the service and all that went with it. Only when at home on leave from the hospital did the patient feel happy and as the day of return approached there was a quick resurgence of the depression. As he failed to improve under treatment and was considered to be suffering a depressive psychosis complicated by his combat experience, he was recommended for prolonged hospital care and eventual retirement by a Board of Medical Survey.

Comment.—This commissioned officer had a depressive episode of the manic depressive type 4 years prior to reporting for active duty and was entering another attack 2 months before exposure to combat. This second depression, which at its onset consisted of feelings of fatigue and despondency, and short periods of uncontrolled weeping, was aggravated after a horrifying combat experience, and complicated by the characteristic startle reaction to sound and by nightmares. These dreams consisted not only of simple war recapitulations, but also of childhood anxieties. Here the combat-induced emotional disturbance became incorporated in an incipient major psychosis.

TREATMENT

The preventive treatment has been clearly indicated in the foregoing. Little of it lies in the hands of the medical officer. All men placed in a position of even small responsibility should be carefully scrutinized with regard to their fitness therefor. Particularly, officers should be selected with the greatest of care. Any officer who creates a feeling of distrust in the men under him should be removed at once, and the causes behind the impression should be examined carefully. Commanding officers should be most ruthless in weeding out incompetent officers and those who perform poorly under fire. Adequate, competent officers, more than any other single factor, will prevent the occurrence of acute psychiatric casualties during combat and the presence of combat fatigue in the crew.

Men need thorough training in all aspects of their work before engaging in actual combat. Any method of increasing training adequacy will greatly increase the effectiveness of the ship in combat on psychological grounds alone. The medical officer should assure himself that his own corpsmen are thoroughly drilled in the duties of their department, and, in addition, should see that the remainder of the crew are completely indoctrinated in the principles of first aid. Nowhere more than in the psychiatric casualties of war is it demonstrated that knowledge helps to banish fear.

No ship should attempt to meet combat conditions until the crew has been assembled for a reasonable length of time, and the men have come to know each other fairly well. To do so is to invite disaster. Wherever possible, crews should be assembled early in the fitting out of the ship, and kept together thereafter. As a matter of policy, shifting of men from one unit to another should be kept to an absolute, unavoidable, minimum.

That fatigue should be avoided as far as possible goes without saying. Unfortunately, this extremely important point, as a general rule, is beyond the control of anyone. It is almost axiomatic in war that men are pushed to the very limits of their physical tolerance; and sometimes beyond. Ships' officers, however, should see that every opportunity to obtain needed rest is seized upon, and where combat is expected in the near future, all subsidiary work should be scheduled in such a way as to allow the maximum amount of rest to each man on board. When circumstances permit, directed recreational activities should be utilized to prevent the psychological fatigue known as staleness. Naval units are considerably more fortunate in this respect than land troops, and every possible advantage should be taken of this good fortune.

These preventive measures are recognized and subscribed to by the Navy. It is obvious that not all can be provided in any given situation, and that these things must be modified by the exigencies of war. We may expect a certain percentage of psychiatric casualties from all engagements. Should, however, any ship show an unusually high incidence of combat fatigue, the circumstances surrounding the engagement should be investigated at once, with particular reference to the factors mentioned. It must be remembered that whenever a large number of casualties have arrived in a hospital from a given ship, there are surely a great many more who did not seek medical aid, and who are exposing some other ship to the damaging influence of their contagious panic. In dealing with the neuroses of war, we find that "morale" is not some ethereal myth, but a tangible problem composed chiefly of sound leadership, good training, familiarity with ship-

mates, and lack of fatigue. Unless these conditions are met, no amount of propaganda will raise morale.

The active therapy of combat fatigue is relatively simple and quite effective. The primary indications are two: Rest and emotional desensitization of the patient to the traumatic experience. Rest is obtained by the use of barbiturates with a free hand, and with them it is possible to manage cases on board combatant ships long before they reach a hospital; as a matter of fact, if properly handled, many may never need hospitalization. There is no sleight of hand or secret about the use of the drugs; remembering the toxic limitations, enough is given to put the patient asleep and keep him asleep. Just how long a period of rest is needed early, no one can say; the indications must be met for the individual. An immediate rest period of at least 48 hours probably is advisable, although, of course, a less extensive time will have some value if the longer period is rendered impossible by operating conditions. Patients kept asleep longer than 48 hours will need special nursing care to prevent pulmonary complications, and special attention to feeding and fluids. It is seldom necessary to carry out such a prolonged period of narcosis, and in cases where indicated, it probably would be safer to allow the patient a waking interval of 12 hours before further narcosis while he is still on board ship. In hospitals, of course, any degree of prolonged narcosis can be carried out in accordance with the established routines. Most medical officers will be tremendously surprised to see the enormous improvement in their so-called "neurotics" after this prescribed period of rest.

Regardless of the improvement obtained by rest, the emotional desensitization should be begun immediately thereafter. For the successful management of any case a sympathetic attitude on the part of medical personnel in attendance is indispensable. Too many such patients have been accused of "gold-bricking" or have been ignored. Emotional desensitization consists simply of encouraging the patient to tell of his combat experience in an atmosphere of mutual understanding and respect. In a great many cases seen aboard ship, the patients themselves will accomplish much of this if grouped together, thus more or less treating each other. If time permits, each patient should be allowed to tell his story to the medical officer at least once, and the doctor should note what elements in the story are most disturbing to the individual. With an eye on the objective evidence of tension and anxiety, the medical officer can soon tell which of his patients are well, which need more attention from him to recover on board ship, and which will have to be evacuated. He will find his time well spent; a number of men will be saved

for the ship, and others will avoid a long disablement.

A certain percentage of cases will require evacuation from the ship to improve. In this regard attention is invited again to the maxim that the farther from the front line a patient moves, the more difficult it becomes therapeutically to return him to combat duty. Early, accurate diagnosis is therefore imperative. Every effort should be made to give each patient sufficient therapy in the first hospital he reaches, without repeated evacuations farther and farther from action. Once recovered, he can be moved away from the front line with less danger of recurrence and of fixation of the symptoms. The therapy given in hospitals is simply a continuation of that outlined. The patient should be seen by a psychiatrist in daily interviews of not less than 30 minutes at first, decreasing in frequency as indicated. Prolonged therapy is not necessary in pure combat fatigue; cases which do not respond with some rapidity to rather superficial discussion of the combat experience and its relationship to the individual patient, will not recover sufficiently to return to duty under any form of therapy, and should be moved on toward a point where they can receive prolonged therapy.

In this connection, a previously mentioned corollary of treatment is important; men should be given a certain period of time to "digest" the emotional turmoil of one traumatic experience before being exposed to another. This is important even in the ship's company which produces no profound combat fatigue, and should be accomplished where possible. It is urgently necessary for patients who have suffered with the fully developed syndrome of nightmares, startle, and personality change. In these latter cases, it is best accomplished in a center where directed recreation and physical work are available, and not in the overprotective emotionally charged atmosphere of their homes which they meet on survivors' leave. No leave should be permitted any man who suffers with these symptoms. Regardless of other considerations, including his own and his family's demands, he should be sleeping well, having no nightmares, and exhibiting no startle reaction before he is allowed leave. The reasons for this have been pointed out and demonstrated in the cases presented.

The disposition of cases has been suggested at every point. Those who have suffered with uncomplicated combat fatigue and who have recovered in 2 to 3 months of treatment, or less, are good material for retention in the service. As a general rule, they should be returned to the duty they feel capable of handling. Those who have recovered on board their ships need never leave them; those who have recovered in hospitals near the action may return to their units after a period of controlled rest and

relaxation as described; those who have been evacuated to the continental United States, should be returned to limited duty ashore for not less than 6 months, by a Board of Medical Survey. Each recurrence of the symptoms of combat fatigue darkens the prognosis for that attack, and renders return to combat duty less likely. Men who have had limited duty ashore prescribed should be reexamined after 6 months to determine their fitness for sea, if their services are needed again for combat duty.

Again it is pointed out that the occurrence of symptoms of conversion hysteria, and the occurrence of anxiety, not connected with startle, are of bad omen. These men will eventually reach hospitals in the United States, where they will be found very unresponsive to treatment until their discharge from the naval service is assured. They

should be treated, and intensively, to prevent their permanent disablement. The therapeutic methods advanced by Kardiner appear to be the methods of choice for these individuals. Even after recovery, they are not suitable for retention in the military service, and should be brought before a Board of Medical Survey for discharge. Their discharge need not wait recovery; frequently the Survey Board is the therapeutic agent necessary to initiate recovery. Under governmental organization, the Veterans' Administration is charged with the rehabilitation of these men, and arrangements should be made for them to receive the proper treatment from this agency. The Navy Medical Corps at this time has its hands full in accomplishing its primary objective, that of maintaining a physically effective fighting fleet.

CHAPTER 23

ANALYSIS OF PSYCHIATRIC PATIENTS TRANSFERRED TO THE UNITED STATES FROM AN OVERSEAS BASE*

This report is based upon the study of psychiatric patients transferred from an overseas dispensary to the United States.

The histories are analyzed in order to give a clearer understanding of the background of each patient in this group, to emphasize the predisposing factors and to determine the conditions that precipitated the psychiatric disorder which made these individuals unfit for further service.

Only a very few of the entire group of patients saw enemy action of any kind so this can be eliminated from consideration. The factors of fatigue and exhaustion do not play a part as few of the patients were subjected to any physical discomfort prior to admission to this dispensary. Out of our entire group there were six patients who were in combat with the enemy prior to transfer to this dispensary and the experiences resulting from combat were believed to be precipitating factors in the psychiatric disorder in this small number.

Age.—The ages of these patients range from 17 to 48 years with an average of 26.7 years (table 31). The largest number of patients in any group was 7 (21 years of age) and more than half of the patients were in the age range of 17 to 24 years (ratio 34:54).

Birthplace.—The patients in this group gave as their birthplaces 22 states and 2 foreign countries. The larger number of patients were reared in cities and were accustomed to the variety of interests afforded by larger cities. The two patients born in foreign countries came to the United States when young and made their homes in the northern United States.

Home conditions.—During the examinations a careful inquiry was made into the home conditions during the childhood period of each patient to ascertain the presence

of conflicts in the home, the stability of the parents and the degree of parental guidance given. Such factors as security, attention and congeniality in the home were considered important during this developmental period. Upon the basis of these factors the homes were classified as good, fair, and poor. It is not surprising to find that of this group, 25 men were from homes that were definitely classified as poor, based upon the above standard with little consideration given the actual financial status of the family. The homes of 20 of these patients were classified as fair and only 9 as good. It is realized that this arbitrary classification is open to question and further investigation may reveal factors that would cause a change of opinion, but the results obtained would not alter the ratio of the group.

Education.—The education of this group varied widely from grade school to college and a clearcut separation cannot be made. Some of the patients attended high school for 1 or 2 years and this overlapping would cause confusion if this were listed as simply high school education. Similarly the same situation exists with those who attended college for periods of less than 1 year. It was found that only 14 of this group completed high school and that 6 attended college for 1 year or more. The remaining 34 patients received less than a high school education and of this number 18 had less than an eighth grade education.

A consideration of the education of this group of patients gives helpful suggestion when further analysis is made and is an aid in understanding the individual. The 34 individuals who revealed less than a high school education were not feeble-minded as there was only one such case diagnosed and other factors are needed to explain why these individuals failed to continue in school. There are two important conditions, other than feeble-mindedness, that are responsible for early discontinuance of

* By James N. Williams, Commander (MC) U.S.N.R.

TABLE 31.—Age groups

Age	Number
17.....	2
18.....	3
19.....	6
20.....	6
21.....	7
22.....	5
23.....	2
24.....	3
25.....	2
27.....	3
28.....	1
29.....	2
30.....	1
31.....	2
32.....	3
36.....	1
38.....	1
39.....	1
41.....	1
45.....	1
48.....	1

54

school. One is a poor home situation and the other a personality disorder. The first is obvious from the description of the homes of these patients and the second will be substantiated by the psychiatric diagnosis.

TABLE 32.—Birthplaces

State	Number
Alabama.....	1
Connecticut.....	2
Florida.....	1
Georgia.....	1
Indiana.....	1
Iowa.....	1
Kansas.....	1
Kentucky.....	3
Maine.....	2
Massachusetts.....	8
Michigan.....	3
Nebraska.....	1
North Carolina.....	1
New Jersey.....	1
New York.....	3
Ohio.....	2
Pennsylvania.....	9
South Carolina.....	2
Texas.....	1
Virginia.....	3
West Virginia.....	2
Wisconsin.....	2
Foreign.....	2

53



113

Adjustment in civil life.—The patient's adjustment in civil life prior to enlistment in the service could not be accurately determined as the history was obtained entirely from the patient. The standard used in obtaining some idea of past adjustment consisted of evidence of difficulties in school, if any, work-record, whether the patient changed jobs frequently or had difficulty in obtaining work, antisocial conduct, interest in activities other than work, and social attitude.

Using the above factors the adjustment of this group was divided into good, fair, and poor. There were 8 patients classified as good, 21 as fair and 25 as poor.

These figures are rather surprising in that less than half supposedly were poorly adjusted in civilian life. This can be explained only by the fact that all the history was obtained from the patients with no verification possible. If additional history could have been obtained from members of the families of these patients, it is possible that a larger number would be designated as poor.

Diagnosis.—The psychiatric classification of the patients is listed in table 33 and the Navy nomenclature is used. The majority are classified as constitutional psychopathic states. Although this is not descriptive of the condition in all instances, it does indicate that the disorder is characterized by emotional instability and inability to adjust properly in any environment.

The next largest number of patients had psychoneuroses. There were a few psychoses in the group. The duration of the psychiatric disorders could not be accurately determined as it was necessary to depend upon the history obtained from the patient. In the larger number of patients in this group, the detailed history obtained would certainly indicate that they were always poorly adjusted. Several gave a history of previous treatment for various disorders.

The schizophrenic individuals apparently were in a state of partial remission upon enlistment and then an exacerbation occurred when they were confronted with duty away from the United States. It is realized, however, that the rapid psychiatric examination necessary when a large group of men is sent to a base for training could not possibly detect all the abnormalities.

To obtain the information contained in this report required many hours with each patient and the use of various methods, other than direct interview. It is interesting to note that three patients in this group had previously received bad conduct discharges from the Navy and after the lapse of years were allowed to enlist again.

Physical condition.—The physical state of this group of patients was good with few exceptions, and there was no evidence of any organic disease. Each patient had a

TABLE 33.—*Diagnoses*

Diagnosis	Number
Psychosis, schizophrenia (hebephrenic).....	4
Psychosis, paranoid type.....	1
Psychosis, unclassified.....	1
Psychosis, manic depressive.....	2
Constitutional psychopathic state, emotional instability.....	26
Constitutional psychopathic state, paranoid personality.....	1
Constitutional psychopathic state, inadequate personality.....	3
Psychoneurosis, anxiety type.....	4
Psychoneurosis, hysteria.....	1
Psychoneurosis, post-traumatic.....	1
Psychoneurosis, compulsive type.....	3
Psychoneurosis, situational neurosis.....	2
Epilepsy.....	1
Chronic alcoholism.....	1
Somnambulism.....	2
Feeble-minded with psychosis.....	1

complete examination consisting of physical, neurologic and laboratory tests, and when indicated spinal fluid examination, x-rays, and electrocardiograms were also made. There was no evidence of syphilis in this group; the history as well as serologic tests were negative.

There was no evidence of any neurologic disorder in this group of individuals.

Length of service.—The patients in this group had markedly varying periods of service, the longest 16 years and the shortest 6 months. The majority of patients (26) had less than 1 year of duty prior to admission to the dispensary and there were only 6 that had more than 2 years' duty.

The other important factor is the duration of foreign duty prior to admission to the dispensary. The longest period of duty was 18 months and the shortest 2 weeks. The majority of patients (44) had less than 10 months' duty outside of the United States and there were only 8 that had more than 1 year of foreign duty.

Marital status.—The larger number of patients in this group were unmarried (41) and there were only 13 mar-

ried. Many of the patients who were unmarried said that they were engaged or intended getting married when the war is over. The married men with one exception denied any conflicts in the home and professed to be happily married.

SUMMARY

A group of patients from the Navy and Marine Corps were transferred to the United States because of psychiatric disorders which rendered them unfit for further duty at this base. An analysis was made of the important factors obtained from the histories of these patients to give a cross section of the life history and type of psychiatric disorder. These patients did not improve after intensive treatment of various kinds and it was necessary to transfer them to the United States.

The striking factor is the short period of foreign duty prior to hospitalization in an area free from enemy action and affording security. Apparently the wave of patriotism and excitement of training enabled these men to conceal their psychiatric disorders for a short period but soon after leaving the United States there was an exacerbation. Homesickness did not play a major role in these disorders as these patients were not capable of making an adjustment in their own homes.

A study of these patients emphasizes the need for mental hygiene units located at boot training bases in the United States. These units could closely cooperate with officers responsible for preliminary training of the men. During preliminary training the men could be referred directly to such a unit for an interview and could be encouraged to report voluntarily to discuss any problem causing difficulty. Such a plan would facilitate adjustment in the Navy and prevent the precipitation of a psychiatric disorder in an unstable individual.

Frequently a longer period of training is needed for some individuals to adjust. When instability is not detected an individual sent to a foreign base for duty usually manifests psychiatric symptoms after a short period. This factor is illustrated in this group of patients and indicates that present screening is not adequate, especially where selectees are concerned.

CHAPTER 24

PSYCHIATRIC DATA COMPILED AT A UNITED STATES NAVAL PERSONNEL SEPARATION CENTER*

There have been a number of comprehensive reports on the evidence of neuropsychiatric disorders at induction and recruiting stations. The types of defects, both physical and emotional, have been evaluated in adequate numbers of selectees for both this country and that of Great Britain.

It is generally agreed that between 40 and 50 percent of inductees are rejected for various reasons and from 15 to 20 percent for neuropsychiatric disorders or personality defects, often mild and masked enough not to be a problem in civilian life.

In spite of this screening some 20 percent of battle casualties and 30 to 40 percent of medical discharges carried neuropsychiatric diagnoses.

It is therefore of importance to see if, in the final discharge examination of the naval enlisted man from an actual duty status, there is any appreciable incidence of neuropsychiatric complaints or disabilities. It is to be noted here that this material does not represent any hospitalized patients but does include any that may have been some time on a neuropsychiatric service, who recovered sufficiently to be sent back to duty, which in some cases, was limited to the territorial United States.

The separation center processed from 600 to 1,400 subjects daily and some 40,000 had passed through at the time of the compilation of this report.

The data described does not include anything like the whole number but is limited to unselected samples and groups and includes a total of 7,823 subjects.

There are essentially two parts to the material described. The first part was a study of the completed physical examination papers from which the following was obtained:

- (1) Intention of filing disability pension claim.
- (2) Evidence of neuropsychiatric complaints and diagnosis in the health record or in the period of actual military duty.

- (3) Evidence of visual defects alone where no other defect is found, both corrected and uncorrected by lenses.

- (4) Evidence of orthopedic, genito-urinary, or other physical defects not requiring hospitalization.

- (5) The evidence of the presence of pilonidal cysts.

- (6) The percentage of separatees with no physical or psychiatric defect.

- (7) The evidence of insignificant, minor defects not a problem to the subject such as fine tremors, deviated septums in the nose, acne of the body, moderate tonsillar enlargement, hemorrhoidal tabs, and mild degrees of flat feet.

- (8) The presence of a resting pulse of over 100 which remained above 100 three minutes after exercise.

The second part of the investigation involved the psychiatric examination of groups of these men.

The first group were those who told the medical officers, not psychiatrists, that they had in their records a neuropsychiatric diagnosis or had had while in the service psychiatric or emotional problems. The subjects all had their records checked by hospital corpsmen for such diagnosis as an additional measure.

All such subjects were referred to the psychiatrists who appraised the nature and severity of their symptoms and determined whether hospitalization was necessary.

The low percentage of such subjects, i. e., 2.4 percent led us to believe many men were withholding histories of neuropsychiatric trouble for fear admission would delay or prevent separation from the service.

Since 7 percent of the total group were running resting pulse rates over 100 for no apparent reason, it seemed a good idea to explore these tachycardias. Accordingly, any subject with a resting pulse of over 100 was referred to the psychiatrist. It was pointed out in the resulting interview that this was a survey or experimental study in no way set up to delay or alter separation.

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It was found that 40 percent of such tachycardias had mild psychoneurotic histories and 4 percent histories of moderate psychoneurotic symptoms. To control this, 100 men with no increase in pulse rate and no obvious neuropsychiatric story were interviewed by the psychiatrist. In this control series, 10 percent gave histories of mild neurotic symptoms and none of moderate or severe. This agrees with other such control series.

The summary of the collected data is shown in table 34.

TABLE 34.—Summary of data found from examination of 7,823 individual records

	Number found	Percent
Intention of filing pension claim.....	266	3.4
Ordinary incidence of neuropsychiatric history in record.....	186	2.4
Visual defect corrected.....	464	5.9
Visual defect uncorrected.....	1,072	13.8
Other physical defects.....	2,023	28.6
Pilonidal cyst.....	125	1.6
Minor disability.....	815	10.4
Tachycardia (resting pulse 100).....	547	7.0
No defect.....	3,997	51.2

DISCUSSION

The type of psychiatric interview which lasted about 10 minutes, covered questions about childhood and pre-enlistment neurotic symptoms such as bedwetting, sleepwalking, nail biting, unreasonable fears of dark, noise, confined spaces, shyness, spells of anxiety, difficulties in adjustment in school—homework—sex or other social contacts, and histories of chronic somatic vulnerability in the gastrointestinal tract or cardio respiratory system as well as headaches, dizzy or faint spells, etc. The subject was also asked about his service history—length of time overseas and ability to tolerate the stresses of fatigue, combat, and domestic separation. Data as to length of service, time overseas, and combat experience is shown in table 35.

TABLE 35

	Overseas under 18 months		Overseas over 18 months	
	Tachycardia	Normal pulse	Tachycardia	Normal pulse
Combat experience, no N. P. findings.....	3	16	28	25
Combat experience, N. P. findings.....	5	1	10	2
No combat experience, no N. P. findings.....	8	11	8	10
No combat experience, N. P. findings.....	11	3	12	1

It is to be noted that the average subject interviewed here, whether he had a mild history of neurotic symptoms or not, successfully adjusted to the demands of military naval service in wartime. The small percentage of those with moderate neurotic histories also fitted into their military environments without hospitalization but did have difficulty in so doing and might have done better in a civilian war project.

The point to be emphasized is that about 15 percent of the armed forces do their combat and other duties efficiently and successfully in spite of definite neurotic symptoms in their past lives. From other studies it is known that the serious long standing combat and operational psychiatric casualties come from men with such histories and exclusion of all such men might therefore reduce significantly the incidence of poor psychotherapeutic results.

The problem of mild neurotic histories being unmasked by the presence of resting pulse rates of over 100 confirms the thesis that unstable personalities correlate with unstable physiology. Excluding those that overindulge prior to the examination or who had mild infections (colds) the figure of 44 percent shows that this group is worth keeping an eye on by the psychiatrist when men are discharged or inducted.

COMPARISON OF TACHYCARDIA SUBJECTS WITH CONTROL SUBJECTS AS TO LENGTH OF OVERSEAS SERVICE

It is noted that the tachycardias with positive neuropsychiatric findings are 59 percent of the group that were overseas less than 18 months whereas they represent only 38 percent of the group out over 18 months.

There was no essential difference in the men examined with normal pulse rates in this respect.

Of the tachycardias with neurotic histories, 31 percent had pulses over 90 on induction and over half of these, or 18 percent, of the group had entrance resting pulses of over 100. Of the tachycardias not giving neurotic histories, 19 percent had entrance resting pulses over 90 and only one-tenth of those over 90 or 1.7 percent of the whole pulses over 100. This would indicate that a recurring tachycardia is good reason to suspect a neurosis.

An example of tachycardia with a neurosis picked up by interview because of the presence of the tachycardia is as follows:

A 36-year-old divorced machinist's mate, first class on separation after 2½ years of service, of which 2 years were overseas in a noncombat area, was referred because of a resting pulse of 112 which after exercise remained at 116. On entry, pulse was 96. Past history showed presence of persistent nail biting, enuresis to 14, difficulty with sleeping, a delicate stomach, shyness at school, subject to excessive worry and overconcern about health

with cancerphobia. Marriage was stormy and sexually unsatisfactory ending in divorce. Overseas he worried and complained a good deal yet he never turned in and his health record is free of entries of this trouble or hospitalization of any sort. He apparently did his job well in spite of his problems.

An example of tachycardia with no neurotic history follows:

A 21-year-old single gunner with a resting pulse on separation of 124 was seen because of this pulse. After exercise it remained at 110. On entry 5 years before it was 62. He had been overseas 2 years on a ship in combat most of the time. There was no history of neurotic traits or illness and all adjustments were healthy and normal.

The percentage of 51.2 for separatees with no defects seems low for a body of men previously on active duty—but if the 10.4 percent for minor disabilities and the 5.9 for corrected vision be included, the percentage is around 66 percent which is what one might expect.

SUMMARY

The examination forms of 7,823 separatees showed an incidence of psychoneurosis as obtained in routine way of only 2.4 percent.

Seven percent of the men had resting pulses over 100. Of these, nearly half, or 44 percent, or an additional 3 percent of the whole group, gave histories of definite neurotic traits or complaints not sufficient to put them on sick list or interfere with naval service. In a control group of 100 men with no record or physiological evidence of any instability, 10 percent admitted very mild neurotic symptoms that were not serious enough to bother them in the service. There are therefore three groups of separatees with some neuropsychiatric problems: (a) 2 percent who have had frank episodes that brought them to the sick list with entries in the record, (b) 3 percent who by a fast pulse show an underlying sensitivity but who kept at work and out of the medical department records, (c) 10 percent with history of milder symptoms that show up only in a psychiatric interview—a total of 15 percent that should be kept in mind psychiatrically for the future.

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CHAPTER 25

METHOD OF PRACTICING PREVENTIVE PSYCHIATRY IN A NAVAL PERSONNEL SEPARATION CENTER¹

The chief function of the medical department of a naval personnel separation center is to aid in the separation of men from the Navy at a maximum speed by rapidly finding and reporting the physical and mental disabilities of separatees (with emphasis on disabilities incident to or aggravated by service conditions). In our opinion, however, the psychiatric division in such a medical department, in addition to its function in finding and reporting neuropsychiatric problems constituting disabilities, is in a position to make an important further contribution to the work of the separation center along the following lines: (1) Information as to the services offered in local communities by psychiatric clinics and by other facilities for the rehabilitation of veterans can be given to men who have psychoneurotic reactions calling for more or less intensive treatment but who are not so disabled as to warrant delaying their discharge for such treatment; (2) Many "normal" separatees with less deep-seated personal adjustment problems can be provided with effective mental hygiene through brief interviews in the psychiatric division itself;² and (3) Data of psychiatric interest concerning separatees can be collected and evaluated.

In a naval separation center the large numbers of men being discharged (or returned to inactive duty) each day and the rapidity with which these men must be examined have led to mass physical and laboratory examinations of an "assembly line" type. The psychiatrist is last in the line of medical examiners in order to have the benefit of reviewing the results of the general medical examinations. However, because the psychiatric division usually has very few psychiatrists and no available trained psychiatric assistants, such as psychologists and social workers, it cannot

provide even 3-minute interviews with each separatee. Certainly no time would be available for providing the services outlined if every dischargée were to be seen by the psychiatrist. For this reason, at the Naval Personnel Separation Center, U. S. Naval Base, Bremerton, Washington, where only one psychiatrist is permanently assigned, the psychiatric division has been organized so as to utilize the capacities of the psychiatrist as fully as possible.

A screening process has been devised to select separatees for interview with the psychiatrist on the basis of one or more of the criteria from the following three records. This screening is performed by four hospital corpsmen trained by the psychiatrist.

1. *The health record*.—This detailed report of a man's medical history, and clinical and laboratory findings from the time of his induction or enlistment to the time of his separation from the Navy is, with few exceptions, available for every man. The hospital corpsmen are trained to select for interview with the psychiatrist all men whose health records reveal that during military service they have had a diagnosis of (a) neurologic illness (including various forms of neurosyphilis and intracranial injuries), (b) psychiatric disability (including combat or operational fatigue), or (c) disorders such as irritable colon, chronic lumbar myositis, and tachycardia, which often have important emotional components.

2. *Naval medical department Form Y (1939)*.—This is the report of physical and laboratory examinations as made in the separation center. To aid in conserving the psychiatrist's time, abnormalities of station, gait, speech, reflexes, and fine movements are recorded by previous examiners. The hospital corpsmen are trained to refer to the psychiatrist for further neurologic examination and evaluation any man whose Form Y shows such deviations. They select for psychiatric interview the men whom pre-

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²The Civil Readjustment Services available in separation centers deal with problems involving the rights of veterans, education and vocational planning, and the like, but do not provide for psychiatric interviews.

vious medical examiners recommend for such interviews and also men whose reports show possible psychosomatic illness.

3. *A psychiatric questionnaire for separatees.*—This has been compiled by the psychiatrist to serve as a self-administered means of obtaining information of psychiatric interest concerning each separatee. Its present form evolved gradually out of our experience. It is sufficiently concise to be printed on one side of an 8- by 13-inch sheet of paper. The questions were carefully framed so as to be easily understood, and those that proved confusing were altered. Some of the questions are quite broad and general in scope so as to screen out, with a brief questionnaire, not only separatees with psychoneurotic reactions or neurologic disorders, but also "normal" men with lesser concerns that might prove significant in terms of mental health. The form of the questionnaire shown on the next page was used.

The simple introduction that follows the brief identifying data seems, in general, to have been successful in explaining to the separatee the possible usefulness of the questionnaire to him and in encouraging him to answer the questions frankly. The identifying data and questions No. 1 through No. 13 were designed primarily to provide the psychiatrist with a few succinct clues as to the background of men interviewed; unlike the remainder of the questionnaire, these are not used as a basis for selecting men for psychiatric interview. Questions No. 14 through No. 24 were framed to obtain information concerning somatic preoccupations or symptoms of possible neurologic or psychosomatic significance. In conjunction with this group, questions No. 15 through No. 39 were intended to elicit manifestations of deep-seated psychiatric problems as well as of personal adjustment difficulties in relatively normal men.

It is to be noted that certain specific questions referring to enuresis, drug addiction, a history of mental illness, and the like, which are commonly included in psychiatric questionnaires have been omitted. Our experience indicates that such problems usually come to the attention of the authorities during the course of a man's military service and result in his discharge long before he is due to reach a separation center.³

As each separatee reaches the psychiatric division, he turns over to a hospital corpsman his health record and Form Y and in turn receives a questionnaire. The hospital corpsman gives him individual instruction to read and fill it out in one of the adjoining rooms. Questionnaires are

answered in three fairly quiet rooms, each provided with a large enough table to allow each of six men to write with some privacy. A man is given as much time as he needs, but most men finish in less than 10 minutes.

After a questionnaire has been answered, a hospital corpsman, using a stencil, checks it in a few seconds and selects to see the psychiatrist men with answers falling into any one of the following categories: (1) An affirmative response to question No. 24 indicating worry about some sex problem, or to No. 39 indicating serious worries about family matters; (2) Six or more "significant" responses to questions No. 14 through No. 39 inclusive (often there is an affirmative response to question No. 24 or No. 39 among the six or more "significant" responses which results in overlapping of these two criteria); (3) Five or more "I don't know" answers on the entire questionnaire; and (4) A request to see the doctor. If such a request is made by a man who would otherwise not be interviewed, the hospital corpsmen inquire as to the general nature of the problem that the man wishes to discuss if this has not been indicated at the end of his questionnaire. Then the hospital corpsmen select for interview with the psychiatrist men wishing to discuss matters pertaining to his field and refer elsewhere in the medical department separatees with surgical or medical problems having no obvious psychosomatic implications.

If the hospital corpsmen select a separatee for interview with the psychiatrist, the health record, Form Y, and questionnaire are sent with him to the interview. All others pass through the medical department without seeing the psychiatrist.

The screening process is sufficiently flexible to bring to the interview a fairly constant number of separatees hourly. On the average the psychiatrist sees 5 or 6 men an hour. This represents from 10 to 12 percent of the usual number examined in the medical department. When more than this number of men are being examined, the proportion reaching the psychiatrist can be decreased, for example, by using the questionnaire to screen for interview men with 9 or more (instead of 6 or more) "significant" responses. The flexibility of the screening process also permits the psychiatrist to reach for investigative purposes, in addition to those ordinarily screened, special groups of separatees, such as men who have a past history of having been "knocked out," and men with gastrointestinal complaints.

To aid in evaluating the screening process, 300 consecutive interviews of men screened routinely were analyzed. Of these only 42 (14 percent) revealed no problems in neurology or preventive psychiatry. Men with interviews falling into this group either had a combination of "significant" responses which on discussion

³It is possible, of course, that occasional men with problems of these types are able to conceal them successfully and to function adequately in the Navy. Such persons could also easily elude detection in their brief contact with the medical department of the separation center.

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

MEDICAL DEPARTMENT, U. S. NAVAL PERSONNEL SEPARATION CENTER
PUGET SOUND NAVY YARD, BREMER TON, WASHINGTON

Last Name (Print) _____ Initials _____ Rate _____ Age _____
Birthplace _____ No. of School Grades Completed _____
Single _____ Married _____ Ever Divorced _____ Wife Dead _____

PSYCHIATRIC QUESTIONS FOR SEPARATEES

The following questionnaire deals with your personal life and general health. The doctors don't have much time to talk with each separatee. Therefore, if your answers show that you have some worries, you will have a chance to talk things over with a doctor who may be able to give you some hints on how to help yourself to get squared away.

This is NOT A TEST. There are NO RIGHT OR WRONG ANSWERS. Your answers will be kept CONFIDENTIAL and will NOT become a part of any official records. Answer TRUTHFULLY to the best of your ability. NONE OF YOUR ANSWERS WILL IN ANY WAY BE HELD AGAINST YOU.

Just make an "X" after each question in the column under Yes, No, or I Don't Know, according to which answer applies best to YOU. DON'T RUSH, but your first hunch as to the answer is probably the one you should put down. Please answer ALL the questions. Look at the SAMPLE LIST on the wall or talk to the corpsman if you don't understand what to do.

	Yes	No	I Don't Know	
1. Have you had <i>more than</i> 35 months of active service?.....				1
2. Have you served overseas?.....				2
3. Have you been overseas <i>more than</i> 17 months since 1 Sept. 1939?.....				3
4. Have you taken part in at least one major engagement?.....				4
5. Are you a survivor of a ship that was hit in enemy action?.....				5
6. Have you <i>ever in your life</i> been knocked out (unconscious)?.....				6
7. Have you <i>ever been</i> arrested for anything other than minor traffic violations?.....				7
8. Have you had malaria, filariasis (mumu) or a <i>serious</i> disease, wound, injury or operation in the service?.....				8
9. Have you some ideas about what kind of work you want to do after you leave the service?.....				9
10. Will you live in the state where you lived before you joined the service?.....				10
11. As a civilian did you live chiefly in rural areas (places under 2,500 population)?.....				11
12. In 1939 was your home still in the state where you were born?.....				12
13. Were you usually happy during your childhood?.....				13
14. Do your stomach and bowels usually feel well and work all right?.....				14
15. Does your heart worry you?.....				15
16. Do you get bad head or neck aches more often than once a month?.....				16
17. Do your back and limbs usually feel all right and work well?.....				17
18. Do you often get shaky or sweat for no reason that you can understand?.....				18
19. Do you sometimes get dizzy or have fainting spells?.....				19
20. Are you bothered with serious eye, ear, nose, or throat trouble?.....				20
21. For your age, do you think that you get tired too easily?.....				21
22. Do you usually sleep well?.....				22
23. Is your appetite usually all right when you have good chow?.....				23
24. Are you worried about some sex problems?.....				24
25. Are you bothered by crowds or noisy places?.....				25
26. Do you often lose your temper?.....				26
27. Do you find it difficult to make friends?.....				27
28. Have you any fears that you don't understand very well?.....				28
29. Have you any unpleasant thoughts that keep coming back?.....				29
30. Are your feelings easily hurt?.....				30
31. Can you usually keep your mind on what you are doing?.....				31
32. Do you feel that you've had a raw deal?.....				32
33. Is your memory usually fairly good?.....				33
34. Are you usually cheerful and in good spirits?.....				34
35. Have you been nervous for months at a time?.....				35
36. Do you believe that most men of your age are better men than you?.....				36
37. If you can get it, do you drink two quarts of liquor (or more) a week?.....				37
38. Have you had <i>more than</i> two courts martial in the service?.....				38
39. Have you any <i>serious</i> worries about family matters?.....				39

If you want to see a doctor about something that worries you, write in a few words below (or tell a corpsman) the general subject you want to take up.....

proved of no real significance in adversely affecting personality, had problems which were primarily medical or surgical, answered questions carelessly, misunderstood them, or were illiterate. Two hundred fifty-two men (84 percent) had problems involving their personal adjustment. Of these only one (0.3 percent) required transfer from the personnel separation center to a naval hospital for treatment and eventual medical discharge because of a serious psychiatric disability (paranoid state). Six men (2 percent) had problems primarily of neurologic nature.

With regard to the proportion of the men reaching the psychiatrist through each of the three records used for screening, it was found that 273 (91 percent) were selected on the basis of one or more of the criteria obtained from answers to the questionnaire, 31 (10.3 percent) on the basis of one or more of the criteria outlined in connection with the health record, and 7 (2.3 percent) on the basis of one or more of the criteria discussed in connection with Form Y. A scattering of men were screened for interview because of findings in more than one of the three sets of records.

Of 273 men screened out on the basis of the questionnaire, 161 (58.9 percent) showed "significant" responses to 6 or more questions between Numbers 14 and 39 inclusive, 95 (34.8 percent) answered questions No. 24 or No. 39 (or both) indicating worries concerning sexual or family matters, 5 (1.8 percent) answered 5 or more questions with "I don't know," and 59 (21.6 percent) requested to see the doctor. As the total of these various percentages is 117 percent, it is apparent that a number of the men fulfilled more than one of the criteria for selection for interview.

To further evaluate this screening process, 100 separetees with questionnaires showing not more than 2 "significant" responses to questions Numbers 14 through 39 were selected for interview from the group of men who would ordinarily not reach the psychiatrist. These men were interviewed with the same care and technic employed with those who were referred through the screening process. In none of these 100 men was there any recognizable neurologic disorder, or deep-seated personality difficulty requiring hospitalization prior to separation or referral to a psychiatric clinic or related facility after return to civilian status. Seven (7 percent) appeared to be "normal" persons with problems in personal adjustment such as can be profitably discussed in a brief mental hygiene interview. Thus it was felt that, because of the emotional stability and maturity of this group as a whole,

and because of the reluctance of some of these men to see the psychiatrist, these 100 separetees had little to gain from preventive psychiatry or neurology. This is in contrast to the high percentage (86 percent) of the 300 men who reached the psychiatrist as a result of the screening process.

The screening process thus appears to be effective in bringing to the psychiatric examiner a high percentage of the separetees with personal adjustment problems that they are willing to discuss in this situation. It is not within the scope of this article to discuss in detail the types of problems encountered or the psychiatric technics that have proved especially useful in single brief mental hygiene interviews. It might be noted in passing, however, that at the separation center most of the men are seen at a time when their release from service conditions is near, and before they are squarely confronted with the problems of civilian readjustment.

The great majority of those interviewed are "normal" persons with rather superficially determined emotional conflicts arising largely out of marital and other familial stresses, inadequate sex education, trying past experiences in the service, and challenges anticipated on return to civil life. In such persons it is common to find undue fatigability, and many other somatic concerns and tension symptoms, anxieties, irritability, and the like. Only a small minority of men interviewed (perhaps 5 percent) have personality problems of such intensity or complexity as to warrant referral to a psychiatric clinic or related facility (if such is available in his home community).⁴

It appears that the questionnaire often succeeds in helping to prepare a man to understand and accept the general purpose of the interview and to feel comfortable in bringing up for discussion questions of importance in his life. The questionnaire, the health record, and Form Y constitute a time-saving device in the interview situation because they serve to focus attention promptly on pertinent problems. In evaluating the effectiveness of the short mental hygiene interview, our experience has shown that with these aids, despite limited time (usually not more than 10 to 12 minutes for each interview), it is very often possible to obtain the separetee's confidence and to make the interview an experience of practical value to him. The psychiatrist, through his interest in the man, his encouragement of the expression of feelings, his furnishing information and correcting misinformation, often seems to be helpful in bringing a man closer to the satisfactory handling of conflicting needs. It is conceivable that such services occasionally aid men in avoiding more disruptive maladjustments at a later date.

The questionnaire described here has made available a

⁴The "Directory of Psychiatric Clinics and Related Facilities," compiled by the National Committee for Mental Hygiene (1944) and the "List of Fellows and Members of the American Psychiatric Association" (1944) were useful in such referrals.

body of data regarding the possible relationship to mental health of (1) certain diverse factors in military experience, such as overseas and combat operations, and length of service; and (2) selected factors involving previous civilian experience, such as rural versus urban background, the occurrence of interstate migration, a man's own evaluation

of his emotional life during childhood, and the like. The presentation and evaluation of such data are not within the scope of this article, but it is believed that a study along these lines might be helpful in furthering a better understanding of the emotional problems of servicemen and veterans.

CHAPTER 26

MENTAL HEALTH OF MEN DISCHARGED UNDER THE POINT SYSTEM*

Routine psychiatric screening of men discharged from the Navy is not uniformly required as is the psychiatric examination of men entering the service, and experience at this activity does not indicate that there is any urgent need for the extremely careful psychiatric examination which, in the case of recruits, aimed at keeping out the unfit.

At this activity, which has been a separation center for a west coast naval district for many months, the psychiatrists have seen men discharged for a great variety of reasons—inaptitude, overage, underage, convenience of the government, bad conduct, undesirable, and, in the case of servicewomen, pregnancy. When the point system was announced for the separation of general naval personnel from the service, there was some local curiosity as to the types of men being discharged and their general mental health. The senior medical officer initially required the psychiatrists to add a short note to the form Y, commenting on the incidence of abnormal psyche. To assist in getting objective data on a large number of men to supply this

information, recourse was had to the standard personality inventories.

The routine use of the Wilkins-Miles Self-Description Inventory for over a year at this activity was prompted by the fact that the inventory was standardized so that there was a maximum of simplification, all questions puzzling to literates of the mental age of 11 years or less being excluded. The routine use of this inventory on all discharges over a year's period supplied the psychiatrists with certain "stop" questions which were found to be critical questions with survivors of ship sinkings and with men being discharged to civil life. Average time of administration of the SDI has been found to be 14 or 15 minutes whether administered in groups or individually.

The need for a much shorter form became paramount when the large number of separatees began to arrive, and this led the psychiatrist to construct a form which could be completed in little more than a minute, required minimal directions, and could be scored by scrutiny. The questions finally selected on the basis of this psychiatric consensus were:

* By Vayle S. Briden, Commander (MC) U.S.N., and Walter L. Wilkins, Lieutenant Commander H(S) U.S.N.R.

(Last name)	(First name)	(Age)	(Rank or Rate)
1. How long have you been in the service? (months) _____			
2. How long overseas? (months) _____			
3. How many major engagements? _____			
4. Do you usually feel well and strong? _____			YES No
5. Do you often have indigestion or stomach trouble? _____			YES No
6. Do you ever have any dizzy spells? _____			YES No
7. Did you ever have any nervous trouble before entering the service? _____			YES No
8. Have you had any nervous trouble since entering the service? _____			YES No
9. Do you have headaches as often as once a month? _____			YES No
10. Are you happy and sad by turns without knowing why? _____			YES No
11. Are you ever bothered by the feeling that people are reading your thoughts? _____			YES No
12. Do you sometimes have a feeling that things around you are not real? _____			YES No
13. Are you in just as good health as when you came into the service? _____			YES No

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

Items 1 through 3 are for the general orientation of the psychiatrist. Items 4 through 13 are answered merely by encircling the YES or NO. Items 4 and 13 should be answered YES; all the remaining items should be answered NO. Any deviation from this is considered an unhealthy response and can be told at a glance at the sheet. The questionnaire has some space at the bottom of the sheet for additional notes by the psychiatrist which he may wish to make during the interview. This brief questionnaire was administered to the first thousand men separated under the point system, a group which included 131 officers and 869 men. This is considered to be a representative sampling of men being discharged. The median number of months of active duty was 43 (Q_3 of 52 months; Q_1 of 35.4 months). The number of major engagements participated in by these men in general followed a J-curve, with a mode of zero but a range up to 15 major engagements.

TABLE 36.—Number of unhealthy responses by separatees on the short questionnaire

Number of responses	Officers	Men	Total	Percentage
0.....	95	478	573	57.3
1.....	19	192	211	21.1
2.....	13	111	124	12.4
3.....	3	39	42	4.2
4.....	1	26	27	2.7
5.....	0	15	15	1.5
6.....	0	6	6	.6
7.....	0	1	1	.1
8.....	0	1	1	.1

The great majority of these men had surprisingly few complaints which could be considered of psychiatric significance. The total number of unhealthy responses for the group is shown in table 36. Fifty-seven percent had no unhealthy responses; nearly four-fifths had only one such response; nine-tenths had only two. No difference between officers and men could be noted.

The specific responses which these men were likely to check can be noted in table 37. Twenty percent complained of headaches, but psychiatric interview, which of course was focalized by the particular items checked, showed that these headaches were crippling in extremely few cases and in no instance required hospital observation. Eighteen percent felt that their health was not quite as good as when they entered the service. Fourteen percent complained of some nervousness, but this turned out, in the next interview, to be vague and certainly insufficient to hold up a man's return to civil life.

It is significant that the stop questions aimed at detection of possible schizoid trends were so infrequently checked; items 11 and 12 were checked by only 1 and 2

TABLE 37.—Specific responses checked by separatees

Item No.	Officers	Men	Total	Percentage
4. Feel well.....	0	12	12	1.2
5. Stomach trouble.....	3	83	86	8.6
6. Dizzy spells.....	4	72	76	7.6
7. Nervous before entry.....	2	22	24	2.4
8. Nervous since entry.....	9	133	142	14.2
9. Headaches.....	16	186	202	20.2
10. Mood shifts.....	5	58	63	6.3
11. People reading your thoughts.....	0	12	12	1.2
12. Feeling of unreality.....	3	21	24	2.4
13. Good health.....	15	167	182	18.2

percent. Again psychiatric interview indicated that none of these complaints were of deep psychiatric significance. Not a single psychotic was detected through the psychiatric interview, and not a single officer or man was transferred to the local naval hospital for disposition or more extended observation.

In the case of functional complaints, entry was made on the terminal form Y, but no man was thought to be in such a mental state that his discharge need be held up even so much as a day. These data suggest that the mental health of the ordinary separatee is very good indeed, considering length of service, amount of time spent in combat, and so on. Whether such a conclusion is valid or not only time can tell.

Comparative data upon a group not quite so stable at the time of their being seen by the psychiatrists are presented in tables 38 and 39, wherein the number of items checked by the survivors of a heavy cruiser are shown. This

TABLE 38.—Number of unhealthy responses by survivors on the short questionnaire

Number of responses	Number of unhealthy responses	Percentage
0.....	53	19.2
1.....	56	20.2
2.....	59	21.3
3.....	35	13.9
4.....	29	10.7
5.....	18	6.6
6.....	16	5.5
7.....	4	1.4
8.....	1	0.4
9.....	1	0.4

TABLE 39.—*Specific responses checked by survivors*

Item No.	Number of unhealthy responses	Percentage
4. Feel well.....	16	5.9
5. Stomach trouble.....	50	18.4
6. Dizzy spells.....	90	33.1
7. Nervous before entry.....	20	7.3
8. Nervous since entry.....	86	31.3
9. Headaches.....	111	40.8
10. Mood shifts.....	88	32.3
11. People reading your thoughts.....	25	9.2
12. Feeling of unreality.....	47	17.3
13. Good health.....	89	32.7

particular cruiser went down very quickly, and the total number of casualties was great, being tentatively estimated at two-thirds of the ship's complement. The survivors spent 5 days in the water before being rescued. Upon arrival in the United States, they were routinely screened by the psychiatrists, who found in their individual interviews precisely the differences shown in the tables.

These 272 men represent a group which had undergone

severe psychic trauma as a climax to rather severe combat duty and experience. Only 19 percent had no unhealthy responses upon the questionnaire. The group is significantly different from the searates, but this is to be expected, considering the reality of the traumatic experience.

The specific complaints of the survivors are shown in table 39. Clinical impressions of mild depression and fatigue on this group are borne out by the items checked on the short questionnaire. Twice as many survivors as searates complained of bad headaches; over four times as many complained of dizzy spells; and twice as many complained of nervous trouble. Differences on items 11 and 12 also appear to be of significance, and yet only two men were held over because of these items, and they were allowed to go on leave the next day.

In the case of survivors, the examining psychiatrist, feeling that leave is one of the best of therapies, tried to get every survivor to his home and to the beneficial environment presumed to exist there. Very frequently a man was sent on survivor's leave, with the object of the man's benefiting from his leave and then reporting for psychotherapy at his station.

SECTION IV

DELINQUENTS AND DISCIPLINARY INFLUENCES

Note.—In order to clarify any confusion which may be present in regard to naval places of confinement in connection with the following article, it is believed that the following information is pertinent.

During World War II the Navy had several Disciplinary Barracks in various parts of the United States as well as brigs at the naval stations. It also had naval prisons at Portsmouth, N. H., and at Mare Island, California.

It was ordinarily the function of the disciplinary barracks to receive prisoners who were serving sentences of courts martial. The brigs ordinarily retained men awaiting courts martial or other disciplinary action.

In 1946 the Secretary of the Navy issued a directive changing the name of the Naval Prison, Portsmouth, N. H., to the U. S. Naval Disciplinary Barracks, Portsmouth, N. H. The Naval Prison at Mare Island, California, was changed to the U. S. Naval Retraining Command, Mare Island, California.

At the present time (1949) the Navy has four major places of confinement; (1) U. S. Naval Disciplinary Barracks, Portsmouth, N. H., (2) U. S. Naval Disciplinary Barracks, Terminal Island, San Pedro, California, (3) U. S. Naval Retraining Command, Norfolk, Va., and (4) U. S. Naval Retraining Command, Mare Island, California.

These receive only prisoners who have been tried by court martial and are serving sentence. Where practical, prisoners who are considered to be the most likely material for ultimate restoration to duty in the Navy are sent to one of the retraining commands, while those serving the longer sentences and for the more serious offenses are sent to one of the two disciplinary barracks.

CHAPTER 27

THE ROLE OF THE PSYCHIATRIST IN THE NAVAL DISCIPLINARY BARRACKS*

To understand and evaluate the role of the psychiatrist in the naval disciplinary barracks it is necessary to have an adequate estimate of the function and role of this naval institution itself. And it is well to bear in mind also that whenever one considers the milieu in which the psychiatrist does his work one must also be cognizant of the predominant emotional and attitudinal milieu as it is expressed by the medical and nonmedical associates in his immediate environment. This is particularly pertinent in relation to a correctional or penal institution and is of *primary* importance when one is dealing with an institution that must be at one and the same time custodial, disciplinary, eliminative, and rehabilitative. And these many functions that the disciplinary barracks itself must carry out day by day and the emphasis placed on one or the other of them will be determined in turn, by the attitudes held by the individual psychiatrist himself and his associates relative to the future value or lack of value to the naval service of the prisoner himself.

The naval disciplinary barracks is the "ultima ratio regis"—the "last argument" of an exasperated and sorely tried naval service. The population of the naval disciplinary barracks and its counterpart in the Army, therefore, probably represents the purest strain of nonconformity and maladjustment of young men in the post-adolescent age group that one can obtain anywhere. Viewed as objectively, as scientifically, or as medically as one can, this population by its manifest desertion of its duty to the nation in peril can (if we are not careful) arouse in us feelings of resentment and aggression. That just such an attitude is held today by some of the nonmedically trained is not at all surprising. Nor is it surprising that measures taken (or not taken) relative to the rehabilitation and re-education of these men may be determined in large part

by our feelings and attitudes concerning these men *as a group* rather than by scientific evaluations of the individuals comprising the group. And I would emphasize that the psychiatrist may be just as vulnerable to such swings in attitude concerning the naval (or even intrinsic) worth of the men under his care as is the most ardent disciplinarian.

In short, the psychiatrist in the naval disciplinary barracks attempts to play the role of the medical man who is interested in correction, amelioration, or elimination of the problems of the *individual* man and he must play this role in a milieu set up to administer justice and mild discipline to a group, *as a group*, the offense in 99 percent of the cases being the same, i. e., that without authority they left their appointed places and went elsewhere to follow their own desires and wishes regardless of the harm their defection might cause their country or their colleagues. For this they are punished by loss of liberty and within the limitations set up by naval law the psychiatrist must demonstrate that he has something to offer in the care, treatment, and disposition of these men that will be of help to the naval service and to the naval personnel involved.

At the outset, however, it should be stated, I think, that the greatest mistake that can be made by the psychiatrist in a military correctional institution is for the psychiatrist to assume that he can practice his profession as it is practiced in civilian life. Continued and exclusive interest in the individual alone, or even as a major emphasis, by the psychiatrist in the military service of a nation (and particularly if the nation be at war) would seem to me to be the most startling evidence of lack of adaptability on the part of the psychiatrist himself. Naturally he does not have to set aside his ideal of practice but he certainly must, for the time being, be content with only a rough approxi-

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mation to that ideal. Otherwise his effectiveness will be entirely lost and he himself will be miserable.

However, one can, I believe, outline five functions or areas of function assumed or covered by the psychiatrist in the naval disciplinary barracks at the present time. These five functions are in the order of importance and involvement of time: I. Diagnostic; II. therapeutic; III. forensic; IV. educational; and V. research. We shall deal with these five functions in detail.

I. The most important present-day function of the psychiatrist in the naval disciplinary barracks is diagnosis and the suggestions for disposition made on the basis of this diagnosis. In short, the psychiatric department of a naval disciplinary barracks can be considered one of the best examples extant of an outpatient psychiatric "clinic"—a clinic in which all men should be seen at least once in a diagnostic interview by a psychiatrist or by a well-trained clinical psychologist or psychiatric social worker, the work of the latter two groups to be supervised and reviewed by the psychiatrist himself in staff conference.

At the present time, the routine plan in most naval disciplinary barracks is as follows: Upon entrance to the naval disciplinary barracks, whether first offenders or not and regardless of what action they are awaiting, duplicate entrance sheets with the man's name, rate, and offense are sent to the psychiatrist. These men are seen in diagnostic interview and are tested by group test and by additional individual scales if group test results seem to warrant it. On the basis of these preliminary examinations a man may be referred to the out-patient division of the naval hospital for a more detailed neurological examination or for an electroencephalogram. When all data thought necessary to make a psychiatric diagnosis are gathered on the individual man, the entrance sheet is filled out stating whether the man is: (a) Psychopathic and hence is being sent into the naval hospital for consideration for medical survey; (b) normal, nonepileptic, non-feeble-minded, and hence ready for trial; or (c) ready for trial with the opinions and recommendations of the psychiatrist. Here the psychiatrist can include findings on the man pertinent to responsibility, mitigating circumstances in man's family or previous life that he thinks would be of interest to the commanding officer, recorder, or to the judge advocate. The filled-out entrance sheet is sent immediately to the disciplinary officer concerned for his information and forwarding. By this procedure the psychiatrist has taken from the trial list the feeble-minded, the epileptic, the obviously psychopathic, the sex offenders, and the rare psychotics that are found in the naval

disciplinary barracks population. The time and expense involved in trial is saved and the man is well on his way to be eliminated from the service as mentally unfit, unadaptable, or undesirable. If the hospital or the body reviewing a recommended survey disagree with the psychiatrist's opinion of a prisoner he can be tried directly following his return from the hospital.

I think it is a pertinent digression at this point to suggest that much time and expense (and also many needed hospital beds) would be saved if the naval disciplinary barracks psychiatrist and his clinic team (psychiatrist, psychologist, and social worker) could present their material on mentally unfit cases to a survey board meeting periodically in the disciplinary barracks to consider such cases rather than following the costly and time-consuming routine of sending a man to occupy a hospital bed for 2 or 3 weeks (sometimes for months) under "observation." Certainly such hospitalization is probably not necessary in the feeble-minded and epileptic group though it will still be necessary in the questionable or borderline cases.

As can be seen from the foregoing, the diagnostic role of the psychiatrist in the naval disciplinary barracks, is, for the most part eliminative, aimed at the necessary discharge from the service of all those whose poor mental condition or characterological defects (constitutional or acquired) are of such a type and severity as to render their future contribution to the naval service very questionable or definitely harmful. But even in these cases it can be the beginning of a rehabilitative procedure if the man himself is advised as to where he can receive help in his home community and if the home community is informed through social service agencies, notably the Red Cross, that the man is being returned to civilian life and will need all the help that local rehabilitation programs can offer. To see that responsible bodies in the local communities are notified of the psychiatric needs of a returning sailor can be considered one of the functions of the disciplinary barracks psychiatrist.

Now it might be well for a moment to consider sources of "material" or the means of referral of patients to the disciplinary barracks psychiatrist other than through the routine entrance sheets mentioned previously. As naval disciplinary barracks are constituted and operated at the present time a considerable proportion of the prisoner population may be transferred to a particular disciplinary barracks after trial. These are men serving sentence and in many instances they have not been screened psychiatrically since they first evidenced difficulty in adjusting in the service. There are four ways in which these men can come to the attention of the psychiatrist for a diagnosis.

First, they most frequently and most easily come under the observation of the physician at daily sick call. The nature of the complaint, the method of presentation of symptoms, or the repeated appearances of the man at the sick call, all tend to arouse the interest of the psychiatrist and the man is given an appointment for a diagnostic interview in the psychiatric department.

It is the opinion of the author that the psychiatrist himself should hold daily sick call (procedures vary in various disciplinary barracks, depending on their size and personnel) but if he does not, certainly he should attend sick call in the company of the physician primarily responsible for the physical care of the men. For it is only in this way that many men who may be missed during routine examination, or those who develop a psychoneurosis or psychosis during their incarceration, will be discovered and referred for diagnosis or treatment. The superimposition of the frustration attendant upon being sentenced and imprisoned may in itself be just enough to cause a mental break in a man who previously appeared normal. Or the "defenses" (physical or mental) that he brings to bear at such times may be so extreme as to render him abnormal, i.e., definitely psychoneurotic or psychotic. And he is more than likely to appear before the doctor at sick call for help.

A second source of case material is the referrals from the disciplinary barracks chaplain. Men who are troubled by their own inner conflicts, or who are troubled by personal and material conditions in their homes, both of which may have led directly to the offense against naval discipline with which they now stand charged, bring such problems to the chaplain and ask for his opinion and guidance. As a matter of fact, after many months of very close association and collaboration with the work of chaplains on duty in a naval disciplinary barracks, I am convinced that 90 percent of the problems referred to him by the men (as contrasted with the remaining 10 percent which are concerned with spiritual matters) are problems that definitely call for the ministrations and advice of the trained social worker and particularly of the trained psychiatric social worker.

Most chaplains are aware of the psychiatric significance of many problems, or of certain constellations of symptoms, both of which immediately tell him that the case is a medical one and the man is to be sent forthwith to the psychiatrist for diagnosis. However, the psychiatrist should not lose sight of the necessity for counseling with the chaplain in order that the latter will have a clearer idea of the psychiatrist's concern and interest.

Third, the commanding officer, the line officers, or the guards oftentimes will be the first to notice an apparent

mental deviation in those men who do not enter the disciplinary barracks before their sentence and hence miss the routine psychiatric check. More than this, the aforementioned line officers and guards are in the best positions possible to first note abnormalities because they have the men under close observation at drill, in classes, on working parties, during recreation periods, or in the various prisoner compartments. The psychiatrist does get referrals from these men. He undoubtedly gets more of them when the guards are well chosen for their ability to handle men and when the psychiatrist makes known to them that certain difficulties in discipline and in the administration of it can spring from underlying conflicts that call for psychiatric help. The guards must be made aware of the facilities and functions of the psychiatric department if it is to be expected that they use it properly and enough.

Fourth, and finally, the routine psychometric (group) examination of all men entering the disciplinary barracks, whether they are to be tried at the present activity or whether they already have been tried, will enable the psychiatrist to eliminate the feeble-minded individual, assuming, of course, that the man's past academic work, and social histories corroborate the suspicious findings of the standardized test. Also, every man whose I. Q. by group test is found to be below 70 should be re-tested in the psychological department with an individual intelligence test such as the Bellevue-Wechsler scale. Together with these a psychiatric diagnostic interview is secured and recommendations advanced.

II. (a) The psychotherapeutic role of the psychiatrist in the naval disciplinary barracks at the present time is a rather limited one. Surely he does his best by *vis à vis* psychiatric interview to aid the men who come to him for help. Also, he is able to select from the sick call all the cases he can possibly see in the time available for such work. But he definitely cannot make therapy his major function. This is true not only because of the limited number of hours per week that can be devoted to this work with the individual man but it is also limited by the length of time the men themselves are under the restriction of the disciplinary barracks. Many of the men are in the disciplinary barracks for sentences of 5 to 10 or 30 days, some are there only until tried, some come after trial, some are in close confinement, bread and water cases, etc. Finally, long term cases usually are not kept in such institutions but are transferred to the naval prison after a short stay in the disciplinary barracks.

On the other hand, fruitful and worthwhile individual psychotherapeutic work can be done with cases exhibiting: (1) Hysteriform types of reactions; or (2) mild reactive depressed states, both of which are sudden re-

actions against the dawning fact of the "awfulness" and seemingly interminable length of the imprisonment ahead. These reactions are usually seen early in the prisoner's stay and they usually take the anxious, conversion, or agitated forms. (A transient paranoid type of reaction is very much less in evidence among these men.) These men can be helped by the psychiatrist and the help given in relation to these attitudes in the early stage of imprisonment may have considerable effect on their later naval service when their sentence ends and they are restored to duty.

(b) The most effective type of psychotherapy that can be used in the disciplinary barracks is group psychotherapy. Lectures and discussion on personal problems that are to be faced by all men, discussion of naval usages and customs, lectures on the aims of the nation and the service in war and in peacetime plus the role of the individual in carrying them out, all can aid in returning the offender to duty with a different and worthwhile attitude to the service and in respect to his own individual worth. Movies, reading, posters, and radio programs all have a supplementary part to play in this group therapy.

All such group therapy, if it is to succeed, must be given to smaller, more or less homogeneous groups within the prison population. Selection of groups as to more or less the same criteria (age, I. Q., number of offenses, and length of sentence) will make group work more effective. The selection of the groups, the methods of presentation and the "course contents" should be the joint results of close collaboration between the psychiatric, psychological, and educational officers of the activity.

(c) A third type of therapy that is carried out in the disciplinary barracks is remedial therapy for nonreaders or borderline illiterates. Every disciplinary barracks of 500 or more men will have in it a group of otherwise mentally normal men who have never had the opportunity to learn to read or who, having the opportunity to learn, could not take advantage of it because of the existence of a technical reading disability. In most instances in these particular cases, the inability to read contributed at least indirectly to their difficulties in the Navy and in some of the cases it was the direct cause of their infraction in that they could not read muster rolls, transfer lists, and rules and regulations. These men will probably make acceptable members of the naval service once they have learned to read and they are eternally grateful for the interest and help given them. Naturally all of the remedial work is directed at the man's naval service and the reading material is drawn from the words and phrases that the man will encounter in his service period. To this group of illiterates are added those men who themselves feel that they should have added training in reading even though

they may have second and third or fourth grade learning ability.

III. A third role of the psychiatrist in the naval disciplinary barracks is best called his "legal" or "forensic" role in that it has to do with his functions as a specialist on human behavior as it concerns the administration of naval law. We have already cited the necessity for pretrial psychiatric examination of all men entering the disciplinary barracks. To this function also is added the periodic conferences with the disciplinary officer in "borderline" or questionable cases, the presence of the psychiatrist for the defense or for the prosecution when the question of "sanity" or "responsibility" has been raised, the evaluation of cases selected by the commanding officer at captain's mast to aid the captain in determining whether the case in hand is a disciplinary or a medical one. Finally, his opinion is sought by boards dealing with clemency or recommendation for restoration to duty of offenders previously awarded bad-conduct discharges. All of these "forensic" functions should be carried out by the psychiatrist in each disciplinary setting. Needless to say, for this work it is necessary for the psychiatrist to equip himself with the minimum adequate legal knowledge by taking the naval correspondence course in military law.

IV. All of these functions of the psychiatrist, diagnostic, therapeutic, and forensic lead directly to a fourth function, the educational. We do not mean by this the education of the prisoners, for that is the role of the educational officer of the activity. But the psychiatrist's educational role to which I refer here is in the training of the men associated with him to a realization of the significance of some types of human behavior, i. e., the significance of such behavior relative to the abilities and responsibilities of human beings for their acts and their value as harbingers of the individual's probable future worth as a serviceman or as a citizen. The significance of aggression, the question of responsibility, the reactions to frustration, the desires and needs of men whether in the service or out of it, these have to be particularly stressed and re-emphasized with all personnel delegated to guard and care for the naval prisoner with the ultimate aim that all dealings with the prisoner will have as their goal the rehabilitation and return to conscientious duty of all men who are by personality endowment capable of so returning, and returning with an attitude concerning themselves and the service that should make for success as a serviceman. One of the most lasting and worthwhile functions that the psychiatrist can carry out will be found to have been just this one I am now stressing, the education of his non-medical naval associates in a few simple but nonetheless fundamental psychiatric concepts.

V. Finally, the psychiatrist in the disciplinary barracks has another, perhaps minor, but nevertheless important function and duty, the duty to do research in that particular branch of psychiatric work in which his superiors placed him. He should amass data, and with it control data, in order that some light shall be shed on what types of individuals can and do succeed in the Navy as contrasted with those who become chronic naval misfits and failures with the great losses in money and time that the acceptance or reinstatement of such men entail. The psychiatrist in the disciplinary barracks can and should work out predictive schemes and probabilities that will enable the naval enlistment bodies to eliminate (insofar as it is humanly possible to predict) those men who we now see in the finished product of the chronic offender. Such studies aimed at the better selection and retention of men must be continuous as in the case of our colleges and universities where data are constantly being collected and evaluated. Our country is going to need a large and efficient Navy for many years to come and the problem of personnel selection will still be one of the greatest problems to be faced. The psychiatrist in the disciplinary barracks should make his contribution to this all-important problem of selection through pointing out definitely established scientific methods the type of man the Navy does not want, ever.

Finally, the psychiatrist at all duty stations can be of considerable aid to his country if he turns the spotlight upon himself and upon his own specialty to determine, in-

sofar as he can, what kind of a role he should play in the various naval activities to which he may be assigned not only for the performance of creditable duty at some possible future date but to better enable the medical-officer procurement branch to select and assign psychiatrists in some distant struggle that may befall the nation years hence. The necessary training background for psychiatrists in their particular type of work, the role of the clinical psychologist, and the need for trained psychiatric social workers are all problems which are important to the Bureau of Medicine and Surgery and an elucidation of beneficial and feasible plans regarding them are a part of what might well be termed the "research function" of the psychiatrist assigned to all naval establishments at the present time, including the activities designed to care for disciplinary cases.

In summary, there are outlined the present functions of the psychiatrist stationed in the naval disciplinary barracks with a few hints as to how he might possibly function better in the future. In conclusion, it should be stated again that the activity which we are considering here is not a psychiatric pavilion, nor should it be looked upon as such, but it is a disciplinary barracks where within the limitations set by such a correctional institution the psychiatrist functions. In carrying out these multiple functions, he will have the happy privilege of bringing to bear on this whole problem all of the advances in knowledge that comprise the fundamental bases of modern psychiatry and penology.

CHAPTER 28

THE NAVAL OFFENDER¹

MOTIVATING FACTORS

The thousands of men, awaiting or undergoing discipline, idle or only partially employed while in confinement, presented a challenge during our manpower shortage. In a peacetime Navy the problem of the offender was not so pressing. If a man by repeated offenses indicated that he was incorrigible, he was discharged from the service. Many whose patterns of delinquent behavior were not too well established were taken in hand by officers and petty officers long experienced in the handling of men and gradually molded into useful, well trained and disciplined seamen. New men, homesick and confused, tempted to desert, would be helped by a veteran crew. The training was more leisurely and the demands not as great. To the young lad the Navy became a father substitute. The married man with the strong family attachment was not the problem he is today, because those men did not often join the Navy.

With the greatly expanded Navy and the relaxing of its former rigid standards for acceptance, the multiplication of behavior problems was inevitable. The methods of the peacetime Navy were found not entirely suitable or expedient for both the increased number of offenders and the new problems which they brought with them.

The widespread induction of men at rapid speed into the service has introduced many psychopaths, mental defectives, illiterates, physically handicapped, and emotionally unstable, as well as delinquents, in spite of the fact that an effort to screen them has been made. Practically every variety of offender, including the sexually perverse, has been detected and when indicated eliminated. These supply many of the disciplinary problems in the Navy. They eventually become part of some "brig" population.

These men represent nearly every State in the Union. Figure 13 presents the geographic distribution of 582 cases selected at random.

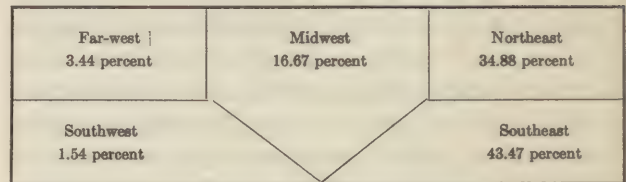


Figure 13.

The offenders from whom the data for this study has been collected were admitted to the disciplinary barracks of the U. S. Naval Receiving Station, Norfolk, Virginia, over a period of approximately one month. These men are admitted for disciplinary action following findings at captain's mast or sentence of summary court-martial, or while being held pending transfer to a naval prison in pursuance of sentence of general court-martial.

All men when admitted fill out an interview questionnaire prepared by the psychiatric unit. This questionnaire supplies pertinent information regarding the man's status in the Navy, a brief review of his duty history, the nature of the present offense and previous offenses, family and home backgrounds, marital status, educational and delinquency histories prior to entrance into the Navy, nature of his physical complaints, and the man's own personal opinion regarding the Navy, his duty, and his own evaluation of his adjustment to the naval service. In addition to this he indicates whether he desires to discuss any personal problems in private.

The questionnaire is used as a supplement to an interview by a psychologist experienced in clinical procedures as well as in delinquency problems and the field of correction. The psychologist is on the alert for emotional and psychiatric problems that may be the motivating factors back of the offenses. In such cases the men are referred to a psychiatrist for evaluation and proper disposition. Hospitalization rather than discipline has often been indicated.

One thousand such questionnaires have been selected at random from the files of the psychiatric unit. These form the background for the data of this study. They

¹By H. Robert Otness, Lieutenant H(S) U.S.N.R., and George A. W. Stouffer, Jr., Lieutenant H(S) U.S.N.R.

furnish facts relative to the sociologic and psychologic make-up of the offenders and supply interpretations of their motivations.

All the motives of human behavior are not known. Much, however, has been discovered regarding man's intellectual status, his emotional strivings and thwartings, the influence of body on mind and vice versa, the relative influences of nature and nurture, the importance of happiness on one's job and the effects of failure and success, the value of adequate childhood training and guidance, the value of avoiding placing square pegs into round holes, and many other facts pertaining to the adjustment of man to society.

Although man comes into existence through a fairly uniform pattern he is subjected to a great variation in the factors of his heredity and the type of home and social culture in which he must develop. The importance of a happy childhood, well directed, planned and encouraged, in the preparation for adult living, need not be elaborated upon here.

Although these facts are not readily observed in man's personality, they nonetheless explain some of his reactions to life as a whole and are frequently basically responsible for his attitudes.

The data obtained in this investigation have been grouped or classified under various headings to facilitate presentation to the reader. The information expressed in terms of percentages is based on 1,000 naval offenders unless otherwise stated. The percentages of these same factors for the Navy as a whole are not available.

GENERAL CONSIDERATIONS

	Percent				
1. Proportion of naval offenders as to Regular and Reserve status	<table> <tr> <td>Regular</td><td>15.3</td></tr> <tr> <td>Reserve</td><td>84.7</td></tr> </table>	Regular	15.3	Reserve	84.7
Regular	15.3				
Reserve	84.7				
2. Enlisted or drafted	<table> <tr> <td>Enlisted</td><td>60.9</td></tr> <tr> <td>Drafted</td><td>39.1</td></tr> </table>	Enlisted	60.9	Drafted	39.1
Enlisted	60.9				
Drafted	39.1				
3. Percentage having had sea duty	53.1				
4. Percentage having had combat duty	21.65				
5. Percentage having survived disaster at sea	1.7				
6. Average length of service in the Navy	12.15 mo. (range 2 to 55)				
7. Average age	20.45 yrs. (range 15 to 37)				
8. Percentage as to rating	<table> <tr> <td>Rate</td><td>13.0</td></tr> <tr> <td>Non-rated</td><td>87.0</td></tr> </table>	Rate	13.0	Non-rated	87.0
Rate	13.0				
Non-rated	87.0				
9. Offender from ship or shore	<table> <tr> <td>Shore</td><td>56.3</td></tr> <tr> <td>Ship</td><td>43.7</td></tr> </table>	Shore	56.3	Ship	43.7
Shore	56.3				
Ship	43.7				
10. First offender or recidivist	<table> <tr> <td>First</td><td>45.0</td></tr> <tr> <td>Recidivist</td><td>55.0</td></tr> </table>	First	45.0	Recidivist	55.0
First	45.0				
Recidivist	55.0				
11. Average number of offenses per offender	2.52 (range 1 to 8)				

FAMILY BACKGROUND

1. Father living	73.5
2. Mother living	84.1
3. Parents divorced or separated	18.43

4. Stepfather	11.1
5. Stepmother	7.5
6. Has brothers or sisters	91.98
7. Has half-brothers or half-sisters	9.4
8. Reared in a foster home or orphanage	4.6
9. Thinks he had a happy home while growing up	86.3

MARITAL STATUS

	Percent
1. Single	66.99
2. Percentage of those married, having children	51.8
3. Happily married	82.7

EDUCATIONAL BACKGROUND

1. Range of schooling	None to 3rd-year college (average 9.43 grades)
2. Did well in school	72.3

DELINQUENCY BACKGROUND

1. Played "hookey" in school	47.7
2. Has been in juvenile courts	11.0
3. Has been arrested in civilian life	27.1
4. Has been in jail (detention)	22.1
5. Has been in reform school	3.1
6. Has been in prison (sentence)	3.0

ATTITUDE TOWARD NAVY

1. How well does he like the Navy	<table> <tr> <td>Fine</td><td>44.8</td></tr> <tr> <td>Fair</td><td>42.6</td></tr> <tr> <td>Not at all</td><td>12.5</td></tr> </table>	Fine	44.8	Fair	42.6	Not at all	12.5
Fine	44.8						
Fair	42.6						
Not at all	12.5						
2. How well does he like his duty	<table> <tr> <td>Fine</td><td>36.7</td></tr> <tr> <td>Fair</td><td>35.8</td></tr> <tr> <td>Not at all</td><td>27.5</td></tr> </table>	Fine	36.7	Fair	35.8	Not at all	27.5
Fine	36.7						
Fair	35.8						
Not at all	27.5						
3. How well does he think he is getting along in the Navy	<table> <tr> <td>Fine</td><td>25.3</td></tr> <tr> <td>Fair</td><td>48.1</td></tr> <tr> <td>Not at all</td><td>26.6</td></tr> </table>	Fine	25.3	Fair	48.1	Not at all	26.6
Fine	25.3						
Fair	48.1						
Not at all	26.6						

FACTORS OF INSTABILITY

1. Complains of trouble in sleeping	34.5
2. Considers himself to be a nervous person	47.3

"NP" REFERRAL

1. Referred to the psychiatrist for further study	11.1
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PERSONAL PROBLEMS

1. States that he has personal problems he wishes to discuss	38.2
--	------

Personal problems (not tabulated) center chiefly around domestic difficulties (financial, health, marital), concern about personal health, need for legal advice or Red Cross aid, dissatisfaction with duty in Navy, and worries about the outcome of present offense or in connection with allotment or pay account irregularities.

General considerations.—The high proportion of Reserve offenders is to be expected in view of the present great preponderance of Reserve personnel. The pre-Pearl Harbor men are the seasoned sailors and have become adjusted to the demands of sea duty, to being away from home and to Navy life in general, but the introduction of the hazards of war has been new for both groups. The adjustment of men to sea duty is important. More consideration could be given by the seasoned crew to the new

sailor coming aboard his first ship. His training in boot camp has been rapid and none too thorough. Early discouragement on first assignment, combined with fear and the anticipation of danger have had their share in producing "AOL" offenders.

The length of time in service does not seem to be as important as does the amount of responsibility and incentive the man has had in making a nonoffender. The correlation between length of service and number of offenses is not too significant. Age alone is not a good guide. The problems of the adolescents and the older men vary. The younger have the difficulty of submission to authority, while the older men have physical and domestic hurdles.

Frequently men with very little or no ability are sent to Service Schools, while others with good high school and some college education are held back—both misfits becoming disgusted with the service, and potential offenders. With the increased temptation on shore, more men become offenders than when on board ship. Dissatisfaction with duty, lack of consideration on the part of superiors, fear, seasickness, poor ship morale, callow officers and seasoned sailors, are all important factors.

The first four to seven months in the Navy produce many first offenders. Often the return of the offender to his ship at the end of his confinement results in a recidivist, his reputation being already established. Duty reclassification would save many men and would constitute all the rehabilitation needed in certain cases. Court-martial involving fines aggravates the home economic problems and results in a repeated offense, the home obligation seeming greater than the sense of patriotic duty. Recidivists are to be expected among the mental defectives, illiterates and the psychopaths.

Family background.—The potency of the childhood and family backgrounds in shaping the personality must not be overlooked. The solidarity of a good home reflects itself in the stability of its members. The insecurities of childhood produce instabilities in adult life. Broken homes, divorced parents and mistreatment place an indelible mark on children, and are common background findings among delinquents. A recent study of civilian delinquents² showed 78 percent with fathers living, 83 percent with mothers living, and 22 percent with parents divorced, in contrast to a nondelinquent group having 93 percent fathers living, 90 percent mothers and 4 percent divorced. The problems of the large indigent family, the farm boy

needed at home, the subtle implications of the "only child," the over-protected home, the child from orphanage or foster-home, all create potent attitudes in the individuals and give them life-long frustrations.

Marital status.—The married man finds it difficult to be away from home, often for the first time. Because of the unwillingness or inability of the wife to carry on the battle on the home-front he is tormented with economic problems. The tragedy of unfaithfulness and divorce enters. He may have fixed obligations of payments on home or on insurance; he may have business interests with outstanding obligations, as well as many other emotionally frustrating situations.

Educational background.—This has a very important bearing on the production of naval offenders and is closely tied up with the selection and classification of men. The mental defectives, the illiterates, the defective-illiterates, and the educationally retarded groups that are coming into the service in large numbers are constantly overwhelmed by the demands made on them by the Navy. To escape the unpleasant they go AWOL, or become offenders through their lack of comprehension of tasks to be done or through being misunderstood. Their psychologic make-up is difficult to understand by the untrained. The men with good schooling who are placed in inferior duty assignments are also dissatisfied, unhappy men. A school background of "playing hookey" and of difficulty with teachers is a forerunner of delinquency.

Delinquency background.—A recent report³ stated that about 2 percent of all school children are problem cases, and that 4 out of 5 of these become overt delinquents, and 3 out of 4 overt delinquents become criminals. As compared with these civilian figures, it can be readily seen that the naval offenders show a high rate of delinquency potentiality. About half of them had "hookey" records. There are also relatively high percentages of civil arrests and jail detentions. Although the percentage of reform school and prison cases is small, it is significant in considering insubordination. The influence of former inmates of reform schools and prisons upon the potentially non-delinquent must not be treated lightly; the younger men often select such a figure for hero worship and think that that is part of being a "salty sailor."

Health complaints.—Forty-three and seven-tenths percent of the 1,000 men registered some physical complaint on admission to the brig. Many of these complaints were psychosomatic in type, precipitated by the struggling within oneself to rationalize the offense and to gain attention and pity. It is interesting to note how old complaints and old injuries, that existed many years prior to enlistment, became "alive" again on confinement in the brig.

²Middleton, W. C., and Fay, P. S.: Comparison of delinquent and non-delinquent boys with respect to certain attitudes. *J. Social Psychol.* 18: 155-158, August 1943.

³Barnes, H. E., and Teeters, N. K.: *New Horizons in Criminology*. Prentice-Hall Inc., New York, 1943, p. 945.

Attitudes toward Navy.—About 87 percent of the naval offenders indicated that they liked the Navy, leaving 13 percent who disliked it. This latter group may be a serious one in influencing the attitudes of others. That 27.5 percent did not like their duty indicates the need for some effort at more appropriate reassignment. The 26.6 percent of offenders who feel that they are not getting along in the Navy, are those unhappy in their work, inefficient, and on the way to becoming chronic offenders through discouragement.

Factors of instability.—The large percentages who had sleep disturbances and nervous feelings may suggest a prevalent psychoneurotic make-up. Emotional problems of fear, the aftermath of combat, the tension that accompanies confinement, plus the perseverative nature of a neurotic childhood all are factors in the behavioral instabilities observed.

"NP" referrals.—The relatively small percent of "NP" referrals (neuropsychiatric), in comparison to the other

percentages cited, should not be misconstrued as unimportant. Within this group there have been several psychotics who were potential menaces to shipmates and civil society. Hospitalization rather than confinement was the need. All "NP" cases are not hospital cases; some are less serious mental hygiene problems. This 11.1 percent does not include the psychopathic personality group (constitutional psychopathic states).

CONCLUSIONS

This study has been a survey of some of the important psychologic and sociologic factors among naval offenders, and offers some explanations for their poor adjustment in the Navy. The 1,500 offenders considered represent about 3,750 offenses, and 7,500 weeks (conservative minimum estimate of 2 weeks per offense away from duty), or about 1,260,000 man-hours, spent in confinement.

Each ship and station should seek out the important factors within its organization that may be contributing unknowingly to the offender problem in the Navy.

CHAPTER 29

THE NAVAL PERSONAL INVENTORY AND THE NAVAL OFFENDER

U. S. Naval Disciplinary Barracks Hart's Island, New York, N. Y.*

Those acquainted with the literature in the field of criminology are cognizant of the numerous studies of delinquent groups with various "personality scales" and the varying degrees of success in predicting antisocial behavior by means of these scales. (1, 2, 3, 4, 5, 6.). The present research consists of a preliminary attempt to evaluate 1,239 Navy court-martial prisoners with the Navy Enlisted Personal Inventory and to determine the extent to which this Inventory might be used in pointing out those individuals who may be expected to become disciplinary problems through some psychopathological pattern.

The Navy Enlisted Personal Inventory consists of two parts one of which is an abbreviation of the Cornell Selectee Index and the other a short form of the Shipley Inventory. The description of the purpose of the Navy Personal Inventory is quoted below:

"Scoring and Interpretation: This instrument is designed to select that portion of the population for whom psychiatric investigation is most strongly indicated. It should not be used for 'cutting' or eliminating personnel independently of psychiatric confirmation. Individuals scoring above certain levels on either part should be referred for psychiatric interview. If all individuals in the population are routinely examined, then individuals scoring above the prescribed levels would warrant more intensive investigation than the remainder.

"It should be noted that the 'Investigating Scores' are merely tentative and vary for different service groups. Individuals score *at or above* the levels indicated below should be considered for psychiatric referral. A further re-

port on the use and interpretation of the Inventory will be issued in the near future."

INVESTIGATING SCORES

	<i>For Amphibious Personnel</i>	<i>For Submarine Personnel</i>
Part 1	10 or above	8 or above
Part 2	1 or above	1 or above" (7)

This scale was given to 1,239 unselected individuals at a naval disciplinary barracks. The group was made up of 1,121 white men and 118 Negroes. Of the total, 243 were awaiting trial and 996 were serving sentences of General Courts-Martial. Those serving sentences were further categorized into groups which were ultimately to be discharged with a Bad Conduct or Dishonorable Discharge and those who were to go back to duty after serving their sentences.

Scores for each of the groups on Part I of the inventory are given in Table 40. A statistical breakdown of these findings as presented in Table 41 reveals that if a score of 8 were to be used as the cutting point for further examination 50.2% of the total group would fall in this category. The scores for each of the sub-groupings are fairly similar and the differences are not statistically significant, with the exception of the difference between the whites and Negroes. The difference here is 14.8% in those checking 8 or more questions and the standard error of the difference is .047. The critical ratio therefore is 3.1 and the chances are better than 99.9 out of 100 that this difference is statistically significant. In considering the reliability of the sampling we find that the chances are better than 99.9 out of 100 that in none of the groups would the true percentage fall below 41%.

From this we must assume that approximately one out of every two men entering the brig scores sufficiently high to warrant being picked out for special study. Although norms for the general Navy population are not available

* By Bernard Locke, Lt. Comdr., H(S), U.S.N.R., and A. C. Cornsweet, Lt. Comdr., H(S), U.S.N.R.

to the writers at this time it is apparent that this figure is high.

Line 5 of Table 41 gives the average number of significant questions checked by each of the groups. Here again the number for the Negro group is somewhat higher than for the white.

Table 42 gives the distribution of scores on the critical or "stop" questions of Part II of the inventory for the same groups. Breaking this down statistically in Table 43 we find that from 57.2 percent to 89.0 percent of the individual groups have checked at least one critical "stop" question; with the average for the total population studied

being 77.6%. Here, as might be expected from Part I, there is a marked, and statistically significant, difference between the Negroes and whites, the relative percentages being 89.0 and 76.4 respectively. However, another difference, which was not expected on the basis of Part I (and which the writers are at a loss to explain at this time), was the score made by the group awaiting trial. Only 57.2 of the individuals in this group checked a significant answer as compared to 78.9, 76.3, and 77.6% for those to be discharged, those serving sentence and the total group respectively.

Considering the reliability of the sampling again we

TABLE 40.—Distribution of Scores on Part I, Navy Enlisted Personal Inventory

Score	Awaiting Trial	Bad Conduct or Dishonorable Discharge	Back to Duty	Total Group	Negro	White
0	5	2	9	16	0	16
1	14	11	36	61	1	60
2	10	25	49	84	5	79
3	11	26	65	102	11	91
4	18	24	55	97	5	92
5	13	22	46	81	5	76
6	16	21	39	76	4	72
7	24	22	54	100	12	88
8	14	17	49	80	12	68
9	13	18	37	68	9	59
10	19	21	50	90	3	87
11	18	22	38	78	10	68
12	13	14	40	67	8	59
13	13	20	29	62	9	53
14	8	15	39	62	7	55
15	13	9	25	47	10	37
16	11	7	16	34	3	31
17	5	5	8	18	3	15
18	1	2	7	10	0	10
19	4	0	2	6	1	5
20	0	0	0	0	0	0
Totals	243	303	693	1239	118	1121

TABLE 41.—Individuals Checking Eight or More Significant Questions on Part I

	Awaiting Trial	Bad Conduct or Dishonorable Discharge	Back to Duty	Total Group	Negro	White
1. Total Number of Cases	243	303	693	1239	118	1121
2. Number of Cases Checking Eight or More Significant Questions	132	150	340	622	75	547
3. % of Total Checking Eight or More Questions	54.3	49.6	49.1	50.2	63.6	48.8
4. Standard Error of Percentage	.043	.028	.019	.014	.044	.014
5. Average Number of Significant Questions Checked	8.5	7.8	7.8	7.9	9.2	7.8
6. Standard Deviation of Mean	4.8	5.0	4.8	5.4	4.5	4.7

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

find that if the entire group of naval offenders were to be studied the percentage of the total group would fall between 71.5 and 81.1%. In light of these findings it appears that approximately three out of every four individuals coming to a Navy brig would have been selected by Part II of the Naval Enlisted Personal Inventory for special duty. Here again the norms are not available for comparison but it is quite obvious that our findings are high enough to merit consideration.

Table 44 presents the distribution of answers to all of the questions of Part II of the inventory, including the non-critical as well as the critical questions. Since, at the moment, we have no basis for comparison they are presented in order that those non-brig activities which may

have built up some norms may use them as a check in validation.

Table 45 presents an analysis of the responses of 200 brig inmates to the 32 questions of Part II. From this we find the non-critical complaints most frequently checked are:

Question No.	Cases
2—Are you easily upset or irritated?	115
5—Do you have the feeling of being watched while you are at work?	75
6—Do you often have pressure or pains in the head?	78
7—Do you often have spells of dizziness?	76
8—Do you often shake or tremble?	76
19—Do you often have difficulty in falling asleep or staying asleep?	87

TABLE 42.—Distribution of Scores on "Stop" Questions—Part II

NAVY PERSONAL INVENTORY

Score	Awaiting Trial	Bad Conduct or Dishonorable Discharge	Back to Duty	Total Group	Negro	White
0	50	64	164	278	13	265
1	66	69	149	284	23	261
2	40	52	129	221	16	205
3	30	45	84	159	10	149
4	20	35	64	119	17	102
5	16	12	43	71	8	63
6	12	9	28	49	13	36
7	5	6	10	21	7	14
8	0	6	11	17	2	15
9	0	1	5	6	2	4
10	1	2	4	7	4	3
11	0	1	0	1	0	1
12	0	1	0	1	1	0
13	2	0	2	4	1	3
14	1	0	0	1	1	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
Totals	243	303	693	1239	118	1121

TABLE 43.—Individuals Checking One or More "Stop Questions" on Part II

	Awaiting Trial	Bad Conduct or Dishonorable Discharge	Back to Duty	Total Group	Negro	White
1. Total Number of Cases	243	303	693	1239	118	1121
2. Number of Cases Checking One or More Stop Questions	139	239	529	961	105	856
3. % of Total Checking One or More Questions	57.2	78.9	76.3	77.6	89.0	76.4
4. Standard Error of Percentage	.032	.023	.016	.012	.029	.010
5. Average No. "Stop Questions" Checked	2.3	2.3	2.3	2.3	3.7	2.1
6. Standard Deviation of Mean	2.3	2.3	2.3	2.3	3.1	2.2

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Question No.	Cases
20—Do you sometimes have nightmares?.....	99
23—Do you get spells of exhaustion or tiredness?.....	102

Similarly the critical questions that are most heavily weighted are:

Question No.	Cases
9—Do you suffer badly from frequent severe headaches?..	66
10—Have you ever vomited blood?.....	50
25—Have you suffered from severe long-lasting pains in the stomach that have been relieved by food?.....	61
32—Do you drink more than 2 quarts of whiskey a week?..	51

Table 46 presents the psychiatric impressions on 100 unselected cases scoring 8 or above on Part I of the Naval Personal Inventory. These impressions were obtained from the men's records and were written prior to the administration of the Inventory. If we include straight behavior disorders (classed as "Undisciplined") in the positive findings we note that 90 percent of the cases have

TABLE 44.—Item Analysis—Part II—200 Unselected Cases

Question No.	Cases	Question No.	Cases
1	79	17	51
2	115	18	55
3	73	19	87
4	58	20	99
5	75	21	41
6	78	22	60
7	76	23	102
8	76	24	16
9	66	25	61
10	15	26	10
11	18	27	9
12	18	28	10
13	16	29	27
14	50	30	19
15	23	31	15
16	7	32	51

TABLE 45.—Distribution to Total "Yes" Answers Part II Naval Personal Inventory

Score	Awaiting Trial	Bad Conduct or Dishonorable Discharge	Back to Duty	Total Group	Negro	White
0.....	22	25	61	108	3	105
1.....	6	15	60	81	6	75
2.....	12	26	36	74	3	71
3.....	15	18	42	75	9	66
4.....	11	15	35	61	4	57
5.....	13	13	40	66	3	63
6.....	13	20	44	77	8	69
7.....	15	15	19	49	7	42
8.....	7	19	45	71	8	63
9.....	22	16	33	71	8	63
10.....	14	21	34	69	5	64
11.....	7	14	30	51	7	44
12.....	14	18	27	59	4	55
13.....	14	9	33	56	5	51
14.....	13	15	30	58	4	54
15.....	14	10	21	45	4	41
16.....	7	5	28	40	1	39
17.....	7	5	26	38	6	32
18.....	3	11	12	26	8	18
19.....	2	2	11	15	1	14
20.....	1	2	6	9	3	6
21.....	5	4	8	17	3	14
22.....	1	1	4	6	3	3
23.....	1	4	3	8	2	6
24.....	0	0	1	1	1	0
25.....	2	0	1	3	0	3
26.....	0	0	2	2	1	1
27.....	1	0	1	2	0	2
28.....	1	0	0	1	1	0
29.....	0	0	0	0	0	0
30.....	0	0	0	0	0	0
31.....	0	0	0	0	0	0
32.....	0	0	0	0	0	0
Totals.....	243	303	693	1239	118	1121

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

TABLE 46.—*Psychiatric Diagnosis on 100 Unselected Cases Scoring 8 or Above on Part I*

Diagnosis	Cases
Negative	10
Undisciplined	12
Immature	12
Constitutional Psychopathic States	
Inadequate Personality	15
Emotional Instability	14
Criminalism	4
Borderline Intelligence	4
Psychoneurosis	14
Combat Fatigue	2
Chronic Alcoholism	8
Neurological Disorders	4
Schizoid Personality	1
	100

TABLE 47.—*Psychiatric Diagnosis in 100 Unselected Cases Scoring Below 8 on Part I*

Diagnosis	Cases
Negative	45
Undisciplined	11
Immature	18
Constitutional Psychopathic States	
Inadequate Personality	8
Emotional Instability	9
Criminalism	3
Borderline Intelligence	4
Psychoneurosis	1
Chronic Alcoholism	1
	100

TABLE 48.—*Previous Courts-Martial in 100 Unselected Cases Scoring 8 or Above on Part I*

Number of Courts	Cases
0.....	29
1.....	20
2.....	27
3.....	16
4.....	5
5.....	1
6.....	0
7.....	1
	100
Mean —	1.54

TABLE 49.—*Previous Courts-Martial in 100 Unselected Cases Scoring Below 8 on Part I*

Number of Courts	Cases
0.....	27
1.....	35
2.....	15
3.....	16
4.....	4
5.....	2
6.....	1
	100
Mean —	1.45

been classified as not being psychiatrically negative. When one compares this with the results obtained for 100 individuals who scored below 8 (Table 47) we find a striking contrast. Here, if the "undisciplined" classification is included again we find that only 55 percent show some psychiatric aberration as compared to the 90 percent in the other group.

Although a cutting score of eight gives only 10 percent false positives it does miss a considerable portion of true positives in the group studied and the writers plan to investigate this point further.

An attempt at prognosticating the number of previous offenses (exclusive of Captain's Masts) by means of scores on Part I of the inventory proved valueless as is indicated in Tables 48 and 49. The average number of offenses for those scoring below eight is 1.45 as compared to 1.54 for those scoring above eight. The difference between the two means is not statistically significant.

SUMMARY AND CONCLUSIONS

The present investigation has attempted to evaluate the Naval Enlisted Personal Inventory as a tool in predicting naval delinquencies. Employing the suggested "cutting" scores of eight for Part I and one for Part II we have found that Part I alone would pick out 50.2 percent for investigation.

Statistically reliable differences were found between the whites and Negroes and both portions of the scale; the Negroes scoring considerably higher on both portions.

A statistically significant difference was found between those awaiting trial and those serving sentence on Part II of the inventory but not on Part I. This difference has not been explained.

High scores on Part II of the inventory were validated by check against psychiatric examination.

The scale does not serve as an aid in predicting number of naval offenses.

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CHAPTER 30

PSYCHIATRIC EVALUATION OF THE NAVAL DELINQUENT*

Although actual hostilities of World War II have long ceased, the problem of delinquent conduct among naval personnel still presents an imposing question for consideration even in peacetime. To that end, so-called naval retraining commands have been established in various parts of the country for the study and consideration of the typical naval offender.

Chappel (1), in a statistical study conducted by the Corrective Services Division of the Bureau of Naval Personnel, found that only one-third of 1 percent of the combined strength of Navy, Marine Corps, and Coast Guard was in confinement at any time as a result of trial by general court martial. This low percentage of delinquency, he believed, was due to a variety of causes among which were:

1. High caliber of service personnel motivated by due patriotism and love of country and the freedom for which one engaged in battle.

2. The Navy's high standard of indoctrination, discipline, and leadership.

Chappel also revealed that the number of naval personnel in confinement at any time during the last war was 1 percent lower than the high peak reached in World War I. It may be concluded, then, that although the problem of delinquency is a serious one, it involves but a small percentage of naval manpower. Studies made by the Bureau of Naval Personnel point out also that 94 percent of all naval prisoners have committed military offenses involving unauthorized leave or absence over leave, whereas only 6 percent have committed offenses which ordinarily would land an offender in civilian court, such as theft, assault, sex offenses, and the like.

The author had a tour of duty as naval psychiatrist assigned to the special type of naval disciplinary estab-

lishments on Yerba Buena Island in San Francisco Bay where were located the brigs and the various naval courts and was present at Captain's Mast and observed every type of offender from his first appearance before the commanding officer to his later appearances at a deck, summary, or general court martial. Every prisoner was given a complete neuropsychiatric study, and any special request, be it from judge advocate, the defense counsel, or the prisoner himself, was honored by a more complete review including a social service study. It is from this general group that some 2,000 cases have been chosen to reveal the types and percentages in contradistinction to a group of 13,727 men who were screened "off the line" in a naval training station (2).

In the interest of thoroughness this pertinent problem has been approached along lines of social control and the inquiry pressed in different directions. A questionnaire was devised in detail so that considerable data could be obtained from the numerous headings (3). It was then given to the 2,000 men who were told that the material thus obtained would not be used against them, and that they need not sign the questionnaire unless they wished to do so. Each prisoner filled out the questionnaire in private, which took about 20 minutes. The questionnaire itself was designed as an adjunct to the personal neuropsychiatric interview which was given routinely. The neuropsychiatrist was always on the alert for any psychiatric problem which might have been a definite motivating factor behind the specific offense. In many cases, if the problem became sufficiently important, the man was not allowed to go to the brig but instead was sent to the hospital for a more detailed study.

DISCUSSION

The early work of Locke, Cornsweet, Bromberg, and Apuzzo (4) revealed that in a group of 1,063 offenders

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TABLE 50.—*Neuropsychiatric diagnosis in discipline cases*

Diagnosis	Cases
Constitutional psychopathic state (all types).....	282
Psychoneurosis (all types).....	216
Combat fatigue.....	21
Operational fatigue.....	12
Pathologic sexuality.....	50
Schizophrenia.....	2
Schizoid personality.....	1
Personality disorder.....	16
Chronic alcoholism.....	14
Drug addiction.....	3
Somnambulism.....	6
Enuresis.....	8
Immaturity.....	6
Mental deficiency.....	12
Motion sickness.....	2
Conscientious objector.....	3
Neurological disorders.....	7
No disease.....	1,585
Total.....	2,046

TABLE 51.—*Summary of neuropsychiatric discharges among inductees*

Diagnosis	Cases
1. Constitutional psychopathic states.....	4,280
<i>a.</i> Inadequate personality.....	2,294
<i>b.</i> Emotional instability.....	164
<i>c.</i> Sexual psychopathy.....	98
<i>d.</i> Paranoid personality.....	118
<i>e.</i> Criminalism.....	73
<i>f.</i> Schizoid personality.....	86
2. Psychoneurosis (all types).....	3,419
3. Mental deficiency.....	1,043
4. Enuresis.....	876
5. Post-traumatic syndrome.....	683
6. Migraine.....	236
7. Somnambulism.....	562
8. Convulsive disorders.....	441
9. Illiteracy.....	390
10. Neurological disorders.....	540
11. Alcoholism.....	897
12. Immaturity.....	236
13. History of psychosis.....	74
Total.....	13,727

there was a loss of some 90 man-years of service through the aggregate absences. These authors were also in agreement with Chappel in that they found only a very small percentage of the total naval manpower involved. It may also be pointed out, however, that in pre- or post-war civilian life one may remain away from his job without permission. During a war this may be considered unpatri-

otic but not illegal. However, naval absence without leave or absence over leave, particularly when the offender misses the sailing of his ship, is absent from a draft, or misses his mobile unit, can become a very serious offense. Finally, if absences continue in great numbers they can have very serious consequences insofar as war effort or military organization in peacetime is concerned. What, then, is the cause of delinquent conduct among naval personnel? What is the relationship of the delinquency to family difficulties? What are some of the fundamental emotional and environmental causes? Usually there are surface reasons and deep reasons. In a former study were listed some routine ones given by men to excuse themselves for having taken unauthorized leave (5):

FREQUENT REASONS FOR UNAUTHORIZED LEAVE

1. No reason.
2. I did not like my present duty.
3. Sickness in the family.
4. I got drunk.
5. Not enough leave—no leave.
6. Trouble at home.
7. I overslept (hotel didn't awaken).
8. I didn't like ship I was on.
9. Train was delayed.
10. Can't stand work on the ship.
11. Wanted foreign duty.
12. Requested sea duty.
13. I objected to restriction.
14. Wanted to visit my family.
15. Became nervous on job.
16. Do not like the Navy.
17. Didn't get proper medical care.
18. I was homesick.
19. I wanted to have some fun.
20. I wanted to see my wife and baby.
21. I wanted to get married.
22. I got sick while on leave.
23. Couldn't get along with officers on ship.
24. I felt like staying over.
25. Fear of the sea.
26. Didn't like Navy regulations.
27. I am a homosexual.
28. Trouble with shipmates.
29. Thought they were trying to frame me.
30. No opportunity for advancement.
31. Mother kept me home—under age.
32. Afraid of combat.
33. I am best suited for civilian work.
34. I thought I wouldn't get caught.
35. Detained by civil police.
36. To see girl friend.
37. Can't keep away from girls.
38. Didn't want foreign shore duty.

It is not difficult to understand that overindulgent mothers might influence sons, or that overdependent wives might cause husbands to become naval offenders. These relatives hardly seem to realize that in so doing they be-

come accomplices in a military offense. It is not at all uncommon for a disciplinary establishment to receive letters written by relatives explaining reasons for a husband's or son's absence and at the same time asking for mitigation or amelioration. Such a letter is received very quickly when allotments are discontinued. The family does not seem to be able to understand that inasmuch as a prisoner is contributing no service he cannot receive pay; or that a bad conduct discharge or even a dishonorable discharge deprives the prisoner of his mustering out pay and the benefits provided by the G. I. Bill of Rights. It is difficult, obviously, to ask relatives of service men to withhold distressing information from them concerning family stresses and problems, nor can we ask them always to write cheerful and encouraging letters. In many instances such as in the following illustration does one continue to offend.

Example.—L. J. D., S2c, a farmer from Minneapolis was AOL or AWOL each time his wife wrote him a letter actually "sending" for him. Once he had to do the painting of a fence, another time to help at the delivery of an expected baby, the third time to help bring in the crop, and the fourth time to replace a drunken farm hand.

There is a degree of goodness in every man, but with strength and weakness in all, not all men outside of prisons are necessarily good, nor are all men in confinement entirely bad. Actually, the author has seen few men in naval custody who were really vicious and antisocial. For the most part they were only irresponsible and inadequate. Over a long period of time traces of weakness may be revealed. Usually these men originated in homes which were broken, dislocated, and loaded with strife. The routine history revealed poverty, lack of security, neglect in infancy and childhood and continued lack of affection later, difficulties in school, on the job, and in the community. These men have records of shifting jobs and numerous arrests and apprehensions. When a difficulty arises they seem to be able to do only one thing—run away. That was their reaction also in the naval service. Whenever pressure, either on shore establishments or aboard ship became acute they would take unauthorized leave. Actually, should a more pleasant situation than the one existing at the present time offer itself, the naval offender will choose the former. Many a man who has been at sea for a long time, or in a foreign post for several months with a perfect conduct record, will, upon arriving in the United States ask immediately for leave which he considers he deserves. It is understandable that such leave must sometimes be refused, with the result that the man goes AWOL.

What, then, are the deeper reasons behind these offenses? First, table 1 reveals that in this sample group the psychiatrically sick were definitely a minority. In other

words, the great majority of these men were considered mentally well. However, they did exhibit personality difficulties which eventually brought them before the naval courts of justice. Many of them were salvageable and for that reason certain cases interesting enough for study and research will be presented later in this paper.

Many men in this group reveal in their rationalizations definite neurotic reactions. For example, some pointed out that their officers looked frightened in combat or at sea which is explainable as projected anxiety. Many a man complained that sea duty was monotonous enough to be feared thus revealing his own insecurity. During the war some of these Navy men stated that they preferred the Atlantic Theater to the Pacific Theater, which was again immaturity.

Locke, Cornsweet, Bromberg, and Apuzzo advanced the following reasons for naval offending. The average youth who enters military service during wartime is subjected to a new kind of life differing considerably from his previous one. Some can adjust to restraint and to authority while others cannot. Bromberg, Apuzzo, and Locke (6) noted that the basic difficulty in desertion and similar offenses lies first in the overt reaction of anxiety induced by frustration of some sort, and second, that there is an antiauthoritarian attitude and anxiety which produce antagonism toward authority and discipline. Otness and Stouffer (7) felt that actually this may be allied to adolescent rebelliousness which may sometimes arouses guilty feelings and later anxiety. A separation anxiety may be seen at training center, in combat areas before, during, or after battle, or even in peacetime. These anxiety attacks may be numerous and may include headache, dizziness, backache, heart pains, and gastric disorders. Brady and Hildreth (8) observed similar findings in a disciplinary group in naval hospitals. Occasionally enuresis and preoccupation with sexual difficulties may be seen among those who leave ships illegally. These men may worry about masturbation or may have a fear of being impelled to attack shipmates homosexually. Leicher (9) predicted much of this behavior in a group of new recruits, an observation also made by Baganz (10).

Example.—J. H. D., MM2c. A 19-year-old male was over leave giving as his reason that he had feared he was homosexual and therefore went AOL for 10 days, during which he lived with a girl whom he had picked up in order to prove that he was sexually potent. His history revealed poor sex training, a marked mother attachment, and, in general, inadequate preparation for the service.

Occasionally a man will wish to be alone, stating that he is intolerant of noise, and will become irritable and wish to fight anyone. Usually these fantasies appear at night during which time a man could actually become wild and destroy anything about him.

An important dynamic force behind naval offending is the inability to stay away from home. Early insecurity developed by this situation may be replaced by an anxiety symptom, tolerated for a short time, but eventually overwhelming the individual. Especially here is seen the extreme parental attachment, particularly of the matriarchal type.

Example.—D. A. R., S2c, age 17, a member of a closely knit Italian family in which he was the youngest child, was AWOL for 7 months because his mother cried incessantly when he was at home on leave. As he was about to return to duty she told him she had had a dream in which he was lost when his ship was sunk. He was, of course, easily persuaded to remain at home.

Anxiety due to separation from home and mother is rarely found to be uncomplicated for usually there is seen some element of hostility directed against the parents. This hostility is explained as a defense against deep dependency needs which the individual cannot express freely and which, therefore, he transfers to the Navy and its officers.

Antiauthoritarian attitudes are also allied to separation and it may be found that a complaint such as sea sickness may mask hidden hostilities toward officers as parent surrogates. This group is independent, self-willed, has fun at its own convenience, and outwardly hates officers. This type of behavior may be seen in the rebellious immature adolescent, up to and including the murderer. Most of them have some neurotic ailments. When seen by the psychiatrist it is easily demonstrable that beneath the cloak of arrogance may be seen dependencies which have never been completely eradicated. Rarely will these men obey orders because this means to them weakness. With punishment, their antagonism toward authority increases. In other words, then, we have here on the one hand antagonism toward authority, and on the other, dependent needs; these two together with fear produce illegal behavior.

What is the make-up of the ordinary offender? He is usually seen to be basically not delinquent, but rather, immature and poorly indoctrinated from the military viewpoint, and quite incapable of adopting a good attitude toward military requirements. As a matter of fact, he considers his offense no more serious than being truant from school. Usually he is the youngest in the family, sometimes an only son. The family itself has been loosely knit with poor supervision of the children. The offender always enjoyed freedom from restraint, left school because he didn't like it, boasts openly of the number of his truancies, but decries his poor occupational record as well as his feeble social contacts. He does not mind stating that the Navy ought to send him home and keep him there. Since the ship doesn't please him he might as well be

transferred to another, etc. We see, thus, poor indoctrination in this immature individual whose background of inadequacies can hardly make of him good naval timber.

Another common group of offenders are those who were accustomed to moving about without restraint. These, too, were fundamentally nondelinquent. They were asocial but yet held responsible jobs with good wages. Induction was never eagerly sought. They liked their home comforts, were closely domesticated, attached to wives, mothers, or grandparents, and had many family responsibilities. When refused liberty or leave, they simply return of their own accord to the scene of their emotional problems. They deny vehemently their exaggerated sense of loyalty to their families and state that consideration for country comes first with them. They reveal strong egocentric qualities and all through life carry on a veritable tug-of-war with authority, regimentation, and restraint.

Example.—P. J. F., S2c, in a period of 10 months in the service, all "Stateside," had two offenses including a 2-day AOL with ship missed. It was noted that he was markedly attached to his wife who considered him rather in the light of a child because of his numerous indefinite ailments. In spite of this type of make-up, the man was making a salary of \$15,000 a year as secretary to the president of a nationally known firm.

CONSTITUTIONAL PSYCHOPATHIC INFERIORITY

This large group actually forms one of the most disrupting elements in society, not only in wartime but in peacetime as well. A true psychopathic personality is one who appears normal on the surface, but has a deep-seated abnormality causing him to be an inveterate troublemaker. I quote the description of this disorder as given by the Surgeon General of the United States Army:

Under this heading is placed an ill-defined, more or less heterogenous group of conditions in which the patients, although they do not suffer from congenital defect in the intellectual sphere, manifest a definite defect in their ability to profit by experience. They are unable to respond in an adult social manner to the demands of honesty, truthfulness, decency, and consideration of their associates; they are emotionally unstable and not to be depended upon; they act impulsively, with poor judgment; they are always in conflict with the law. They do not take kindly to strict discipline. Such persons have a decided influence upon their associates, and upon the morale of the organization, for they will not conform to recognized authority and they derive much satisfaction from cultivating insubordination in others. Frequently they make a favorable impression, are neat, talk well, and are well-mannered. In this general group are to be placed many homosexual persons, grotesque and pathological liars, vagabonds, inadequate personalities, petty offenders, swindlers, kleptomaniacs, alcoholic persons and, likewise, those highly unstable and arrogant persons called pseudoquerulents ("guard-house lawyers") who forever are critical of authority and imbued with a feeling of abuse and lack of consideration of their fellows.

Neuropsychiatrists early in the war encountered many

of these psychopaths who came into the Navy through the efforts of well meaning, but short-sighted judges before whom these men had appeared charged with some crime. The well-intentioned, but poorly informed judge would rule, "I will suspend sentence if you will enter the armed services." Some branch of the service then acquired another troublemaker. This practice was discouraged, but it took time to educate the judiciary.

The psychopath is usually seen to be a rather intelligent and well-built individual, who, at a casual glance may impress one favorably, but the psychiatrist soon identifies him as the chronic misbehavior whose history will reveal that since childhood he has been a difficult problem at home, school, at work, and in the community. He is most skillful in offering excuses and often so deft and glib that he can talk himself out of any difficulty. When he is discharged from the Navy, no matter what his type of discharge, those who know him will remark that once again he has been able to evade his responsibility. Such instances arouse the resentment of shipmates and of the general public, but these men must be handled realistically, for they are "bad actors." Ordinary persuasive reasoning or even punishment cannot reach them, and it is questionable whether time and energy spent on their training or rehabilitation is worth while. Medical men in the service feel that the Navy is better off without them. Actually, later and better information must be obtained on them for they do need help.

Example.—R. L. M., Pvt. U. S. M. C., a 22-year-old male whose preservice record revealed poor schooling with two grades failed, a shifting job record with numerous discharges, drinking since his sixteenth year, and many apprehensions by the police. During the past year before being picked up on a long AWOL charge it was found that he had been married three times. His service record over a period of 5½ years revealed 61 Captain's Masts, 2 deck courts martial, 2 summary courts martial, and 2 general courts martial. He had been "busted" twice. Charges included AOL, AWOL, sleeping on watch, disobedience of orders, stealing a caterpillar tractor, a jeep, a motorcycle, a plane; playing with crooked dice, throwing a firecracker at a Marine general, striking officers, and other misdemeanors.

PSYCHONEUROSIS

In this group we find men with physical and mental symptoms of psychogenic origin. The decision to be made is whether or not the condition is so severe as to warrant rejection. If the man's symptoms have not prevented him from working regularly and maintaining a normal family, social, and occupational routine, he is rarely considered a medical problem. Some attempt is made to give the individual insight into his condition.

The psychoneurotic usually unconsciously converts his anxiety into physical symptoms. These, in the autonomic spheres, are the familiar flushing, sweating, tremor, derm-

atographia, the so-called "irritable" or "soldier's heart," or "effort syndrome," stomach difficulties, dyspepsia, diarrhea, and frequent urination. The neurotic cannot overcome his nervousness no matter how hard he tries, even if he is honest. The more he attempts to control himself the more nervous he becomes. He gives a history of regularly visiting dispensaries asking for the cause of his "nervousness." Encountered are cases of the so-called conversions, such as hysterical paralysis, motor and sensory defects. If these complaints are such that a definite physical cause cannot be found, an attempt is made to ferret out the etiology elsewhere. If handled properly and wisely the individual may be saved for useful service after discipline has been completed.

Under the psychoneuroses are listed the amnesias, a condition encountered regularly. The term "amnesia" has been used loosely to include any temporary loss of memory. It is generally suggested that this must also include loss of one's identity as well as loss of memory for time, place, names, and events. The most frequent causes are: (a) alcohol; (b) pathological or physiological brain disturbance; (c) disturbed physiology of the brain such as is found in epilepsy, so-called post epilepsy fugue, or furor, for which the patient is amnesic and during which crimes may be committed. The literature is replete with writings on the relation of epilepsy to crime; (d) psychological causes in which one deals primarily with hysterical fugues which usually clear up within 24 hours—others within a few months; (e) functional psychoses as may even be seen in depressions; (f) feigned amnesias which generally present the greatest problems.

For example: A prisoner has committed a misdeed and his immediate defense is to disclaim any memory of it. Usually it is rather easy to detect such simulation because the misdeed is planned and the motive, therefore, apparent. The patient, upon repeated questioning, usually gives himself away. However, a detailed history of the patient's life frequently reveals him to be a psychopathic personality with rather good intelligence and it may be necessary to resort to other sources of information such as friends, families, and social agencies for the complete picture. Sometimes a period of observation is needed to permit persistent questioning in an effort to determine the consistency of the patient's behavior. I might add that a case of true amnesia, if it exists in a hysterical type of individual, warrants leniency. Occasionally, with the approval of the courts and with the consent of the prisoner, hypnosis or narco-synthesis may be employed. As might be expected, the longer a man has been "over the hill" the more likely is he to say that he does not remember what he did during that period of time.

Example.—L. M. S., S2c U. S. N. R., revealed a preservice record including poor environmental origins, a broken, dislocated family, schooling only through the fifth grade, a poor work record, numerous arrests for diverse offenses including petty larceny, maltreatment of children, vagrancy, and a history of three divorces. In service over a period of 20 months, all "State-side," he had an AOL charge of 14 months. Narco-synthesis revealed that he had picked up a woman in Los Angeles with whom he lived for 14 months during which time he worked driving a truck. During the interview he stated that he often wanted to return but that he "just didn't have the nerve."

THE FATIGUE STATE

There were many men with combat or operational fatigue who had committed offenses. They fell into two groups, each with particular motivating dynamic factors. Those in which anxiety symptoms were dominant often developed states of maximal fear and in panic ran away from their ships or bases. Had they remained they would have found themselves in a situation where the conflict between the dominant instinct of self-preservation and the danger incident to combat would have been enhanced to an excruciating degree, making unbearable the anxiety symptoms they already possessed. The other group had dominant symptoms of hostility and resentment. They were almost paranoid in the expression of their resentment which was directed toward their superiors who stood to them for parental substitutes who had failed to protect them. It seemed to them that their officers conceived plans to lead them into the combat zone as an expression of personally directed aggression, and the patient prisoners displayed their resentment and frustration by counteraggression.

The dicta for combat or operational fatigue as presented by Raines and Kolb are: (1) increased tension and restlessness; (2) insomnia and battle dreams; (3) startle reaction and personality changes with emotional instability predominating; (4) irrational sense of guilt.

We had about 20 patients who came under this category and they were restored to full duty when they were discharged from a special hospital to which they were sent from this station.

Example.—J. A. H., WT1c, U. S. N., had been in service for a period of 6 years most of which time had been spent at sea participating in practically every major offensive of the war. Symptoms of combat fatigue in this man increased to such an extent that he finally went AOL for 15 days, but later turned himself in, voluntarily. Subjective symptoms and objective evidence were so clear-cut that he was hospitalized, his condition treated, and he was restored to duty with no charges.

PATHOLOGICAL SEXUALITY

This large group of cases included the numerous homosexuals usually encountered. To evaluate these individuals was sometimes a very difficult task. A patient might have

been a basic homosexual all his life, or he might have been a homosexual by chance, by opportunity, by profit, or by social gain. Occasionally he revealed his latency under the influence of alcohol or other drugs. Naturally we looked for psychic traces of effeminacy such as may appear in taste, in thinking, in gait, in actions, but these are not always present in either the passive or active types of homosexual. Many of these men protested loudly that they had had or were capable of having heterosexual experiences, but it is well known that homosexuals have the usual heterosexual wishes and longings, but that they are repressed because of deep seated fears of heterosexuality. Childhood sexual experiences of a fearful nature, especially those due to severely repressive parental attitudes toward such expressions as sexual curiosity, sex play, and masturbation, may, in the child's development, shift him toward homosexuality. Such an individual is likely to reach maturity with many fearful associations with heterosexuality. Under Navy conditions such as present in submarines or other ships, in close quarters, homosexual behavior may break out in men whose previous behavior has been consistently heterosexual. This was also seen at times in some of the brigs.

Example.—J. D. S., PhM1c, revealed in his preservice record a poor marital history with three marriages "on the rocks." Over the period of 4 years and 3 months he had been in the service he had done considerable drinking and upon two occasions was accused of immoral behavior and drunkenness. His last accusation had been accompanied by numerous witnesses to his homosexual activities. He revealed, characteristically, a high pitched voice, feminine body configuration, and was egocentric and satirical. Other psychic traits of effeminacy including taste, mimicry, thinking, and gait were present. Investigation revealed basic homosexuality throughout his entire life.

PSYCHOSIS

Rarely was there seen a case of frank psychosis. Upon numerous occasions men were brought in with acute psychotic episodes following extensive drinking.

Example.—R. S., F1c, appeared of his own accord stating that he was depressed, suicidal, and that he was being "forced" into his type of disturbed thinking. Mental content revealed hallucinations, delusions, and paranoid thought. He wrote a suicidal poem but was thwarted in an attempt to kill himself.

ALCOHOLISM

Alcoholism was the old bugaboo which was always present particularly in some of the older individuals who were slated for discharge diagnosis of "over age." Those who had been on foreign duty would, when they returned to this country, go out on a drinking bout and be returned in discipline status with every sign and symptom of acute alcoholism. There were some who presented signs of true chronic alcoholic deterioration, but they were in the minority. Most of the men who came to my unit had signs

of acute alcoholism. Some developed definite alcoholic hallucinations while in the brig. There were several cases of impending D. T.'s. These men stated that they had begun drinking at a fairly early age and had continued all through life.

Example.—R. B. M., S1c, in his preservice record revealed a long checked history of inadequacy based upon alcoholism. He had been drinking since the age of 14 years, and admitted to having lost at least 20 jobs because of alcohol. In the service over 1½ years, he had appeared at Captain's Mast 6 times, all on drinking charges. Actually he revealed no deterioration per se, but it was obvious that he could not adjust in the service and was discharged.

DRUG ADDICTION

Now and then there appeared an occasional addict who was either referred for smoking illegal cigarettes or who had turned himself in because he feared he was going insane. When a suspected narcotic user was apprehended, it was the policy to investigate the entire barracks for the use of the drug usually centers in a group. At no time was anyone seen in an advanced stage of marihuana addiction. Cocaine and opium ran second and third to marihuana as the drug of choice, probably because these two were more difficult to obtain.

SOMNAMBULISM AND ENURESIS

Both these conditions were occasionally seen, but more particularly in those individuals who were in the brig. Customarily the prisoner reported his problem to the guard who then brought him to the physician for examination. In many cases the enuresis was found to be willful. Somnambulism, too, was seen to exist when men were in custody. Red Cross Social Service reports were usually obtained on these men, and close checks made were to ascertain the validity of their complaints. In any event these men had to serve out their sentences.

IMMATURITY

Occasionally young men of less than the approved age were brought in for evaluation and, in spite of their good past records, many were eliminated in terms of immaturity. An intellectual evaluation of these men was first made. Many begged to be permitted to remain in the service, stating that they would fulfill their sentences and return to service because they were at least physically mature.

Example.—M. C., S1c, was found through a social service study to be but 13 years of age. He had bribed a woman to pose as his mother to sign his service certificate of consent. In the service over a period of 8 months, he had a series of six offenses.

MENTAL DEFICIENCY

There were a good many men encountered who were found by psychometric examinations to be mental defec-

tives. The Kent test, checked later by the Wechsler-Bellevue scale, revealed their classification.

Example.—E. E. S., S2c, a dishwasher aboard a cargo ship with a preservice record of just two years of schooling, had been a farm hand in a very backward community. He was now apprehended for drinking heavily and stabbing a shipmate. His psychometric performance yielded an IQ of 39 on the Wechsler-Bellevue scale, classifying him as an imbecile.

MALINGERING AND SUICIDE

Malingering is much less commonly seen than is generally supposed. Simulated suicide was not uncommon, usually a gesture in which, for example, a wrist was scratched with a razor blade. Pseudosuicide attempts included pseudo-strangulation just before a guard was to pass a cell, drinking of antiseptic foot baths, swallowing pins, electric bulbs, knives, and so on. All guards were instructed to report immediately any depression or change of attitude on the part of a prisoner. It was recognized, however, that if a man wanted to die he could not be prevented from doing so regardless of all the precautions taken. Anyone who handles unstable patients knows that he is going to have some mortality sometime.

Example.—R. A., S2c, who revealed a poor preservice and service record, warned the members of the deck court that he would commit suicide if sentenced. Back in his cell he swallowed an open safety pin which perforated his esophagus resulting in a mediastinitis. It was only through heroic measures that this man's life was saved.

MISCELLANEOUS OFFENSES

Offenders with organic brain damage were seen regularly. The careful study of these men included neurological and psychometric investigations. Some sequelae of meningitis were seen which were ample reason for untoward behavior resulting in disciplinary infraction. Head injuries always warranted intense study.

Example.—R. T. W., Pvt. U. S. M. C., sustained a severe temporo-parietal lesion, the result of a gunshot wound. This examiner considered that this man had sufficient organic brain damage with resulting personality changes to cause his untoward behavior.

UNUSUAL CASES

There were cases which held more humor than pathos. A marine was seen who went AWOL for 5 years because he was "bawled out" by his sergeant. A Navy man was AOL for 3 years and was found hauling vegetables to a naval base. He stated that he considered that occupation as patriotic as his former one. One offender drove a Navy bus for a year before being picked up. Another worked with the FBI for 11 months before his finger prints caught up with him through the efforts of the FBI. Several offenders joined the Army or the merchant marine. One prisoner won \$25,000 in a dice game and when com-

pelled to pay \$14,000 in taxes, went "over the hill." Another offender during his AOL period worked as a civilian bricklayer constructing the brig in which he was eventually housed. Another was found to have a small printing press on which he turned out amazingly accurate liberty cards and leave papers which he sold at fancy prices. He was picked up when the authenticity of his official liberty card was questioned.

CONCLUSIONS

A suggested plan, then, for the disposition of disciplinary cases which have some psychiatric condition is presented: (a) A true and accurate determination of the facts of the violations of regulations, with particular attention paid to determining whether there was present an element of criminality against the person or property of others; (b) if no criminality is involved and the individual is found to be suffering from a psychiatric disorder, this person should, in my opinion, be given a special order discharge as soon as possible; (c) however, if criminality is found to exist, the case should be tried and prior to sentencing, a board consisting of at least one psychiatrist should make a recommendation as to whether the sentence should be carried out in a naval prison or in an institution for the criminal insane.

Traditionally, there will be some opposition to the special order discharge of individuals who have had disciplinary charges brought against them, as the feeling exists in some lay and professional quarters that prisoners receiving such a discharge are "getting away with something." Whether punishment should or should not be avoided is not the important point here. The question to be decided is whether punishment and disciplinary action will be of any value to this man, the Navy, or to his home community later. The type of individual who reacts well to naval discipline and punishment is no different from the individual who reacts well to civil discipline and punishment. The efficiency of the disciplinary programs in the military services is deservedly high, but no amount of any type of discipline or punishment can effectively act as a corrective when there is not present a sense of responsibility, an ability to learn by experience, or a desire for future security. It is absurd to expect men to make a proper military adjustment when they have been unable to adjust to previous civil and legal disciplinary actions. If repeated punishment in the past has failed to correct a chronic delinquent, it is scarcely to be expected that disciplinary ef-

fort, time, and expense expended during a national emergency will be successful.

It should not be forgotten that the code of the Navy presupposes honesty and honor which affords a year-around opportunity for crime on the part of the naval personnel who lack these attributes. It is important, especially now with the new type of recruit, that the percentage of repetition of crimes might be more acute.

The problem of delinquency in the naval service is one which merits much thorough and intensive study, for knowledge of the psychodynamics of the personality of the naval delinquent can provide a basis for the rational approach to his reeducation and orientation as well as aid greatly in determining the direction of a successful program of therapy.

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CHAPTER 31

STUDY OF 1,063 NAVAL OFFENDERS¹

This study consists of an attempt to evaluate, from a psychologic and psychiatric standpoint, a series of factors which might be associated with the production of the behavior leading to incarceration in a naval brig. One thousand sixty-three consecutive, unselected, court-martial admissions to a naval disciplinary barracks were analyzed. The reasons for confinement are listed in table 52. From this table it becomes evident immediately that the problem is almost entirely one of absence over leave, and absence without leave, since 94 percent of the total admissions were for these reasons. The emphasis in this survey, therefore, has been placed on these two principal offenses. The following factors were analyzed:

1. Causes for admission.
2. Length of time A.O.L., A.W.O.L.
3. Previous naval offenses.
4. Previous civil offenses.
5. Surface reasons for offenses.
6. Education and intelligence.
7. Age of offenders.
8. Marital status.
9. Racial distribution.
10. Nativity of parents.
11. Psychiatric findings.
12. Length of service prior to first offense.
13. School delinquencies.

The seriousness of unauthorized absences from the Navy from the standpoint of manpower is indicated in table 53, which shows the length of time lost to the service. The total time that the 1,000 men under consideration were absent is 32,833 days. The 758 who were absent over leave were away for 25,278 days, and the 242 absent without leave stayed away for a total of 8,555 days. The average length of time for the total group was 33.83 days; for the absent-over-leave cases 33.09 days; and for the absent-without-leave cases 36.25 days.

TABLE 52.—Reasons for admission

Reason	Number of cases
Absence over leave.....	758
Absence without leave.....	242
Accidental shooting	8
Possession of another man's property.....	7
Shirking duty	6
Theft of government property.....	5
Forging and selling liberty cards.....	4
Disobedience of orders.....	4
Defrauding Government	3
Breaking arrest	3
Insolence to officer.....	3
Tampering with U. S. mails.....	2
Leaving post without being relieved.....	2
Drunk and disorderly.....	2
Bringing liquor aboard ship.....	2
Taking a prisoner on liberty.....	2
Refusing to work.....	1
Investigation	1
Stealing automobile	1
Material witness—manslaughter	1
Held for action of civil authorities.....	1
Scandalous conduct	1
Violation of censorship regulations.....	1
Asleep on watch.....	1
Assault of petty officer.....	1
Sodomy	1
Total	1,063

These averages are not a true indication of the central tendency of the groups, however, because they are skewed by the few who stayed away for one or more years. Thus a better idea of the "average" length of time is expressed by the medians; these are 16.23 days for the total group; 15.93 days for the A.O.L. group, and 23.20 for the A.W.O.L. group. These 32,833 days lost to the service are exclusive of the time lost after the apprehension or return of these men. If the length of time that these men

¹By Bernard Locke, Lieutenant H(S) U.S.N.R.; Albert C. Cornsweet, Lieutenant Commander H(S) U.S.N.R.; Walter Bromberg, Lieutenant Commander (MC) U.S.N.R., and Anthony A. Apuzzo, Lieutenant Commander (MC) U.S.N.R.

TABLE 53.—Length of time A.O.L. and A.W.O.L.

Number of days	A.O.L.	A.W.O.L.	Total
1-5	105	48	153
6-10	169	33	202
11-15	109	31	140
16-20	56	12	68
21-25	54	18	72
26-30	39	18	57
31-35	21	10	31
36-40	21	5	26
41-45	29	5	34
46-50	22	7	29
51-55	16	8	24
56-60	13	14	27
61-65	10	3	13
66-70	8	4	12
71-75	10	1	11
76-80	11	1	12
81-85	7	4	11
86-90	6	3	9
91-95	5	2	7
96-100	2	1	3
101-105	3	3	6
106-110	1	0	1
111-115	5	0	5
116-120	7	1	8
121-125	1	0	1
126-130	2	0	2
131-135	3	0	3
136-140	0	0	0
141-145	1	0	1
146-150	3	1	4
151-155	0	0	0
156-160	0	2	2
161-165	0	1	1
166 and over	19	6	25
Total	758	242	1,000

were kept from their duties awaiting trial, awaiting sentence, and serving sentence, is added, the totals become truly staggering. When it is further considered that these thousand cases represent approximately 3 months' admission to only one brig, the problem of lost manpower in the Navy approaches a critical point. Figure 14 shows graphically, the number of days lost by the 1,000 men under consideration.

A further feature of the seriousness of this problem is presented in table 54 and figure 15, which show the distribution of naval courts-martial prior to the immediate offense for the group studied. It shows that 53.8 percent of the group are repeaters, many of them after a period at duty of less than a week. One of the repeaters in this group had had 12 previous courts-martial. This figure must be viewed in the light of the following consideration. From

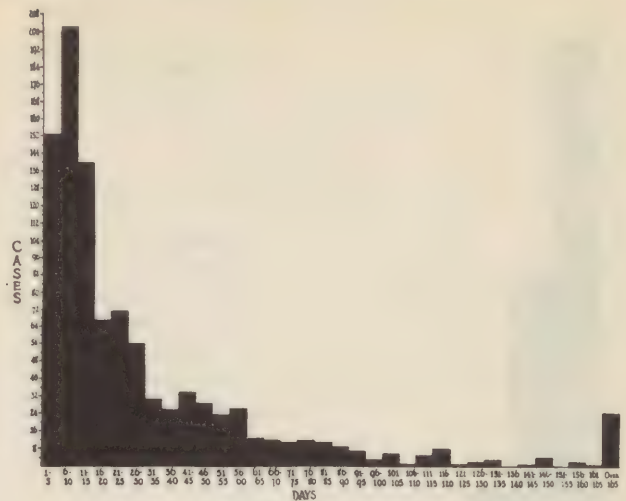


Figure 14.—Length of time A.O.L. or A.W.O.L.

analysis of table 54 it can be assumed that the proportion of repeaters in the Navy will increase as time goes by, since the number of recruits is steadily decreasing proportionately.

Table 55 indicates that 16.7 percent of this group of offenders had come in conflict with civil authorities prior to their entering the Navy. Since the group is essentially a young one, the fact that over 16 percent have already been in trouble in civil life appears to be heavily weighted. This becomes even more evident when one considers the fact that the personnel of the Navy is essentially a select one, in that numerous felons and habitual delinquents are denied admission to the Navy on original application. The number of civil offenses is demonstrated graphically in figure 16.

Since the offense of desertion during time of war is so serious that a sentence of death may legally be prescribed, it is imperative to examine the motivation for this behavior as ascribed by the men themselves. Table 56 lists the surface reasons given by the men for their absences. Examination of this table reveals an almost universal disregard for the seriousness of the present conflict and a hedonistic, egocentric, and, at times, neurotic attitude on the part of these offenders.

By way of illustration, the greater number of men admitted, upon questioning, that the pressing need to see their families was satisfied in one or two of the fifteen or twenty days A.O.L., the balance of the time being spent in "doing the town." Again, many men who found naval medical attention "inadequate" for their ailments, did not bother to consult a civilian physician in all the time that they were out, or even during their civilian status prior to entering the Navy. The psychologic basis for the type

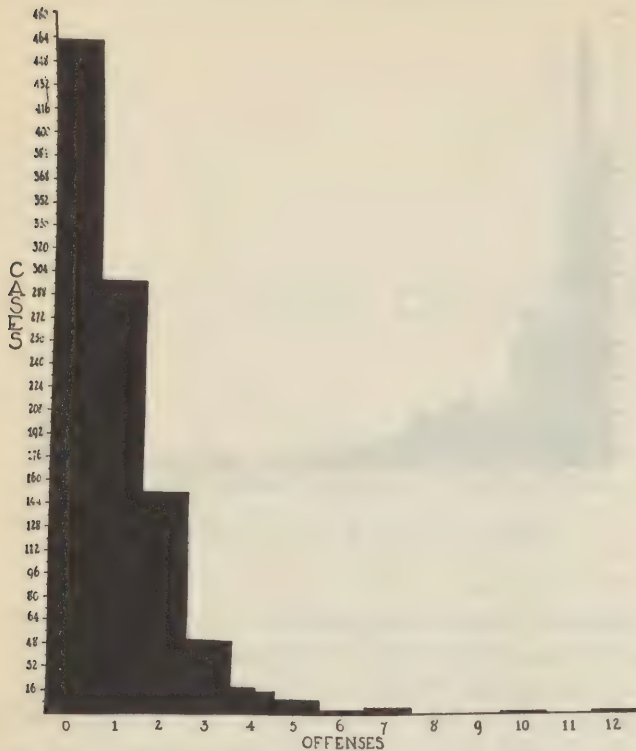


Figure 15.—Previous Naval offenses—exclusive of captain's mast.

of rationalizations presented by these men has been described elsewhere².

Since it might be assumed that the reason for these delinquencies is largely due to lack of education and intelli-

TABLE 54.—Distribution of previous Naval offenses exclusive of captain's mast

Number of offenses	Number of cases
0.....	462
1.....	299
2.....	152
3.....	51
4.....	18
5.....	10
6.....	2
7.....	4
8.....	0
9.....	0
10.....	1
11.....	0
12.....	1
78.....	1,000

²Bromberg, W.; Apuzzo, A. A.; and Locke, B.: Study of motivation for desertions and over leaves in the Navy. Read at the Centennial Meeting, American Psychiatric Association, Philadelphia, May 15, 1944.

³Locke, B.: Various factors in a penal population; J. Crim. Law & Criminol. 33: 316-320, November-December 1942.

gence, a record was kept of the replies to the question "What is the highest grade which you completed in school?" These are presented in table 57 and figure 17. The average amount of schooling completed for the entire group is 9.3 grades. Thirty-four of the men had had some college training and 719 had gone beyond grade school. When this is compared with the norms for the general population and with those obtained by Locke³ of 14,812 civil reformatory and prison inmates one finds that the naval prisoners are slightly better educated than the civil prison group and the general population.

TABLE 55.—Distribution of civil offenses prior to entering Navy

Number of offenses	Number of cases
0.....	833
1.....	95
2.....	23
3.....	15
4.....	10
5.....	7
6.....	4
7.....	0
8.....	1
9.....	1
10.....	4
11.....	1
12.....	1
15.....	1
16.....	1
25.....	1
31.....	1
50.....	1
215.....	1,000

Since it has been accepted that intelligence and education are closely correlated, it may be assumed that the naval prisoners under discussion compare favorably in intelligence with the general population from which they come. Table 62 indicates that only 19 individuals were of borderline or deficient intelligence following examination, confirming the conclusion that this group has not become delinquent because of insufficient intellectual endowment.

Table 58 and figure 18 show the distribution of ages of these offenders. The mean age is 21.55 years and the median is 19.64 years. Since 50 percent of the group is roughly 20 or more years old, it would be difficult to ascribe the high incidence of unauthorized absences to "boyish" irresponsibility.

Table 59 indicates marital status. The majority, 70.4 percent, are unmarried; 27.9 percent are married; and 1.7 percent divorced, separated, or have had their marriages annulled.

Chapter 31.—STUDY OF 1,063 NAVAL OFFENDERS

TABLE 56.—*Stated reasons for going A.O.L. or A.W.O.L.*

Illness:	
1. Became ill while on authorized leave or liberty.....	20
2. To obtain medical attention (naval care inadequate)	22
3. Chronic seasickness	27
4. Repeated headaches	20
5. Other illness or disability which interfered with duties	9
6. Nervousness (including fear of sea, gunfire, etc.).....	44
7. Homosexual	4
8. Drug addict	2
9. Illness, including death, of parents and siblings.....	71
10. Illness of wife (including pregnancy).....	39
11. Illness of children.....	7
Total	265
Don't like:	
1. The Navy	26
2. The ship	40
3. Officers on the ship.....	25
4. Shipmates	10
5. Present duty:	
a. Sea duty	26
b. Shore duty	24
c. Mess attendant	4
d. Armed Guard	2
e. Amphibious	2
f. Engine room	1
Total	160
Went home:	
1. Homesick	45
2. To see:	
a. Parents	26
b. Wife and children.....	35
c. Siblings	9
d. "Girl friend"	6
e. Friend	2
f. Grandparents	1
3. To be home for holidays.....	6
Total	130
Leave:	
1. No leave granted.....	39
2. Inadequate leave granted.....	14
Total	53
Drunk	77
Resented restriction (wanted to be free).....	35
Felt like staying over (to have a good time).....	32
Family trouble:	
1. Personal domestic difficulties.....	20
2. Parental domestic difficulties.....	11
Total	31

Marriage:	
1. To be engaged.....	1
2. To be married.....	22
3. To marry girl he had impregnated.....	6
Total	29
"Was late, so I took more time".....	24
Would like:	
1. To be transferred	3
2. Overseas duty	3
3. Submarine duty	3
4. Promotion	3
5. Aviation duty	2
6. Amphibious duty	2
7. East coast duty	2
8. More action	2
9. Armed Guard duty.....	1
Total	21
Needed at home (financial, help on farm, etc.).....	15
Wasn't drawing any pay (because of fines for previous offenses)	9
"Got disgusted"	9
Stayed home at mother's request (under age).....	6
"Got a crazy spell (my head tells me to do things)".....	6
Stayed with a woman.....	6
Missed train	5
Couldn't find ship.....	5
"Believed I was on authorized leave or liberty"	3
"They were trying to frame me".....	2
To oblige another man who was going A.W.O.L.....	2
"Can't keep away from girls".....	1
Girl friend pregnant—wanted to find responsible party.....	1
"To go home and beat a guy up".....	1
"Sea bag stolen and I got mad".....	1
Total	72

TABLE 57.—*School grades completed*

Grade	Number of cases
Ungraded.....	3
0.....	1
1.....	1
2.....	4
3.....	6
4.....	12
5.....	13
6.....	36
7.....	116
8.....	216
9.....	195
10.....	187
11.....	114
12.....	89
13.....	30
14.....	4
Total.....	1,000

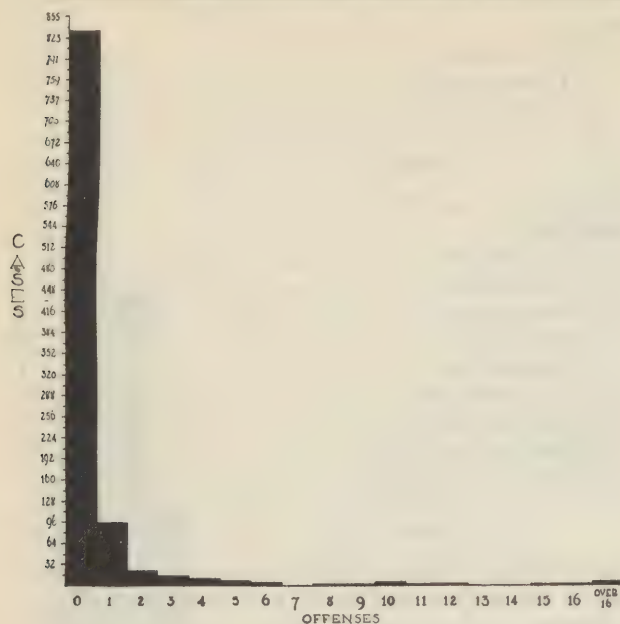


Figure 16.—Distribution of civil offenses prior to entering Navy.

TABLE 58.—Distribution of ages

Age	Number of cases
15.....	4
16.....	10
17.....	52
18.....	180
19.....	175
20.....	126
21.....	103
22.....	81
23.....	63
24.....	31
25.....	20
26.....	20
27.....	23
28.....	15
29.....	18
30.....	23
31.....	8
32.....	6
33.....	4
34.....	7
35.....	7
36.....	5
37.....	4
38.....	2
39.....	2
40.....	1
41.....	2
42.....	3
43.....	0
44.....	2
45.....	2
46.....	1
Total.....	1,000

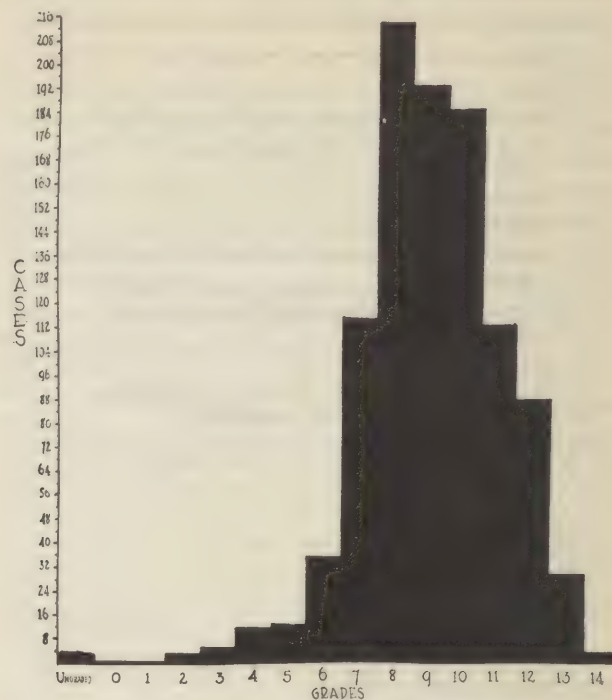


Figure 17.—Academic grades completed.

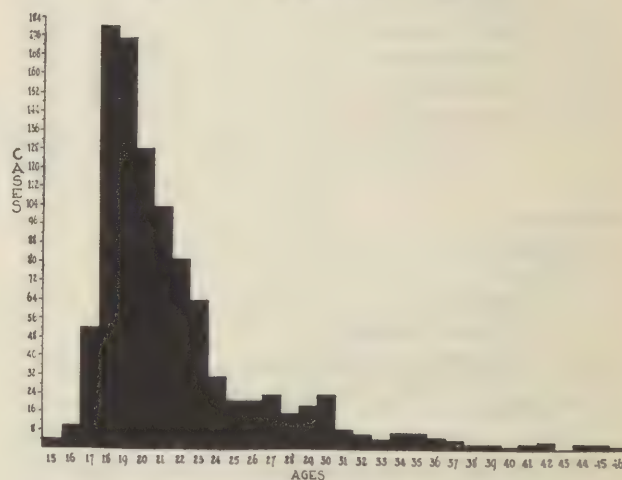


Figure 18.—Distribution of ages.

TABLE 59.—Marital status

Single.....	704
Married.....	279
Divorced, separated, or annulled.....	17
Total.....	1,000

Table 60 gives the racial distribution found in this group and table 61 the country of origin of each of the immediate parents of these prisoners. Table 60 appears to indicate that the number of Negro offenders is proportionately far beyond that which would be expected from their actual number in the naval service.



Figure 19.—Psychiatric findings.

TABLE 60.—Racial distribution

White.....	918
Negro.....	79
Red (American Indians).....	2
Yellow (Chinese).....	1
Total.....	1,000

The findings in table 61 must be viewed in the light of the proportion of seamen in the Navy, born of foreign-born parents. Without a comparison of the nativity backgrounds in personnel in the Navy as a whole and those on a disciplinary status, no definite conclusion can be drawn from this table of parent nativity of first-generation American seamen. It must also be kept in mind that the men studied came predominantly from the Eastern seaboard.

Table 62 and figure 19 indicate the psychiatric diagnoses that were made in each of these 1,000 cases. From these we note that 21.9 percent of the cases present demonstrable neuropsychiatric disorders, and as such are poor material for the naval service. The diagnoses of psychopathic personality, psychoneurosis, and chronic

alcoholism were not made unless the clinical picture was clearly demonstrable, and, unless there was a history of aberrant behavior other than the offense which led to the present difficulty.

TABLE 61.—Country of origin of parents

United States.....	1,350
Italy.....	176
Ireland.....	100
Poland.....	66
Germany.....	49
Canada.....	39
England.....	33
Austria.....	23
Holland.....	16
Czechoslovakia.....	13
Scotland.....	12
France.....	11
Spain.....	10
Greece.....	10
Puerto Rico.....	10
Lithuania.....	9
Portugal.....	9
Russia.....	8
Yugoslavia.....	7
Norway.....	7
Hungary.....	6
Mexico.....	5
Sweden.....	4
Syria.....	4
British West Indies.....	4
Finland.....	3
Cuba.....	2
Nova Scotia.....	2
Brazil.....	2
Denmark.....	2
Armenia.....	2
Romania.....	2
Philippine Islands.....	1
Turkey.....	1
Newfoundland.....	1
Guatemala.....	1
	2,000

Table 63 and figure 20 present an interesting aspect of this problem. The greatest number of offenses occur shortly after boot training, usually during boot leave, and before the individual has had a taste of action. This group usually gives as its reason for unauthorized absence "homesickness" and the desire to "have a good time before I get shipped out." The frequency then drops off for a few months and then rises rapidly in the eighth and ninth months. This rise is apparently brought about by the fact that the men have completed a tour of duty in which they have seen some action and feel that, as a result, they are entitled to leave or more leave than they have been granted.

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

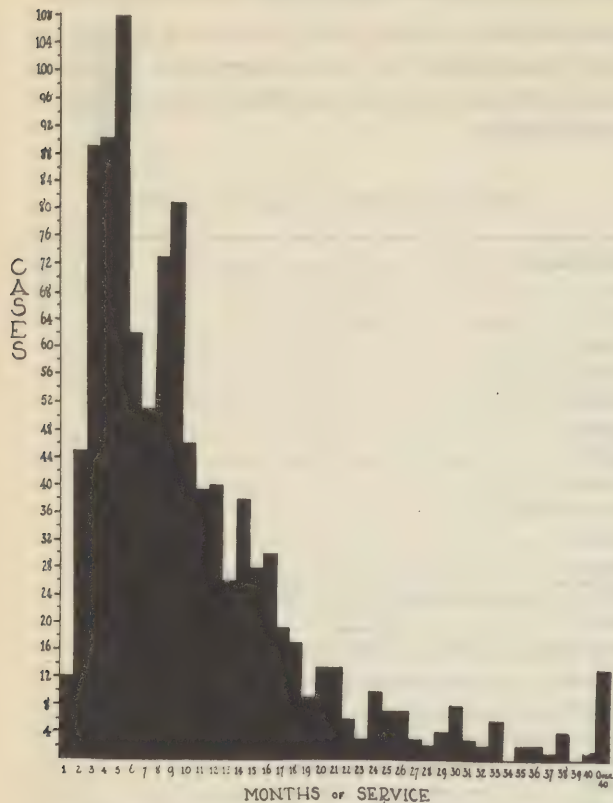


Figure 20.—Length of naval service prior to first court martial.

Table 64 throws an interesting light on this group. Thirty-two percent of these men admitted to truancy while in school; 6.4 percent had been expelled from school one or more times; 2.2 percent had been suspended at least once, and 1.4 percent had spent some time in truant or re-

TABLE 62.—Psychiatric diagnoses

Diagnosis	Cases
No disease.....	781
Psychopathic personality.....	82
Psychoneuroses.....	72
Chronic alcoholism.....	29
Mental deficiency.....	19
Neurologic disorders.....	12
Psychoses.....	5
Total.....	1,000

form schools. Since the type of behavior involved in truancy parallels that found in unauthorized absences from the Navy, it is interesting to note the high incidence of truancy in the sample studied. It tends to indicate that the activities of many of these men conform to patterns of behavior established long before any contact with service life.

TABLE 63.—Length of service prior to first offense exclusive of captain's mast

Months	Cases	Months	Cases
1.....	12	25.....	7
2.....	45	26.....	7
3.....	89	27.....	3
4.....	90	28.....	2
5.....	108	29.....	4
6.....	62	30.....	8
7.....	51	31.....	3
8.....	73	32.....	2
9.....	81	33.....	5
10.....	46	35.....	2
11.....	39	36.....	2
12.....	40	37.....	1
13.....	26	38.....	4
14.....	38	40.....	1
15.....	28	41.....	1
16.....	30	47.....	2
17.....	19	51.....	1
18.....	17	52.....	1
19.....	9	56.....	2
20.....	13	58.....	1
21.....	13	65.....	1
22.....	6	73.....	1
23.....	3	144.....	1
24.....	10	165.....	1
		252.....	1
		Total.....	1,000

TABLE 64.—Academic delinquencies

<i>Truancy:</i>		
Occasional.....	139	
Frequent.....	181	320
<i>Expulsions:</i>		
One.....	49	
Two.....	7	
Three.....	6	
Four.....	2	64
<i>Suspensions:</i>		
One.....	13	
Two.....	5	
Three.....	4	22
<i>Admissions to truant schools.....</i>	14	14
Total.....		420

SUMMARY AND CONCLUSIONS

A series of factors has been studied in an attempt to determine the extent to which they might be involved in producing unauthorized absences for the naval service.

1. The seriousness of the problem was demonstrated by the fact that in the 1,000 cases studied in detail the Navy lost 90 man-years of service through absences, apart

from the time lost while these men were in a disciplinary status.

2. Repeaters comprised 53.8 percent of the number of admissions and the indication is that this proportion will become larger as enlistments in the Navy (voluntary or by selection) decrease.

3. It was found that 16.7 percent of the men had histories of civilian arrests prior to entering the Navy. It is felt that this percentage is relatively high because of the fact that many habitual offenders are not permitted to enter the Navy.

4. The reasons given by the men for their A.O.L. or A.W.O.L. status varied greatly from the true psychologic activation. The stated motivations were the desire to aid or be with the family, particularly in times of illness, personal illness, and the need for a rest after seeing action. The psychologic drives were the desire for pleasure; aggression against authority; and frequently neurotic or immature factors.

5. The men studied were found not to be inferior in intelligence or education from the population from which they derived.

6. Records revealed that 42 percent of the group had been in trouble in school because of frequent trancies, suspensions and expulsions.

7. The mean age for the group was 21.55 years and the median 19.64. This indicates that chronologically at least, if nothing more, the men were old enough to appreciate the seriousness of their offenses.

8. Approximately 30 percent were or had been married. The balance had never been married.

9. The group included 79 Negroes. Since this was 7.9 percent of the total group, it appears to be far out of keeping with their total representation in the Navy. However, this is purely an impression and must be checked against their actual number in the service.

10. Definite neuropsychiatric disorders were found in 21.9 percent of the cases. These individuals are not suitable Navy material and should be discharged eventually because they are a continual source of trouble, not only because of their own inability to adjust, but also because of the difficulties which they cause among their shipmates in the integral unit of a fighting ship.

11. Absences were found to come most frequently after the completion of boot training and after the first tour of active duty.

12. The general conclusion indicated that a longer period of training, screening after the first test of duty, and a program of reeducation to develop maturity, might reduce unauthorized absences from the Navy.

CHAPTER 32

A PSYCHOLOGIC STUDY OF DESERTION AND OVERLEAVE IN THE NAVY*

The purpose of this paper is an attempt to evaluate the psychologic factors underlying the offenses of absence over leave and absence without leave among naval personnel. The material on which this study is based comprises enlisted men sent to the U. S. Naval Receiving Station Disciplinary Barracks, Hart's Island, New York, referred for summary or general court-martial action. As shown in the previous chapter (1) it may be said that in a sampling of our material, 71.3 percent were for A.O.L.; 23.3 percent for A.W.O.L.; and the remaining 5.4 percent involved shooting and involuntary manslaughter, breaking arrest, bribery, theft, infraction of regulations, and sex cases. Thus it can be seen that the former group of offenders constitutes an important source of interference with planned naval activity because of the large number of man-days lost.

In order to estimate the presence and frequency of mental disease among these casts, each summary and general court-martial admission was given a psychiatric and psychologic screening examination. Table 62 from chapter 31 analyzes the sampling in terms of psychiatric diagnoses. Our findings in the sample studied indicate that psychiatrically sick individuals are in the minority. This group comprises the psychotic and prepsychotic, psychopathic, mental defective, chronic alcoholic and psychoneurotic individuals. These men are not salvageable and are of no value to the highly specialized services of the Navy. If they are not screened out in induction stations, training stations, special schools, or naval hospitals, they can and should be screened out in the disciplinary barracks. We are left, therefore, with a large group of psychiatrically well individuals who although "normal" exhibit personality difficulties or emotional and behavior

reactions that bring them before court-martial boards. Since these men are theoretically salvageable, our practical interest in saving man-days in the military service lies in this direction.

As an aid in understanding the motivation for misbehavior in the Navy, the reasons given by the men themselves for their misconduct were studied and contrasted with what could be learned of the inner emotional sources of their behavior. The former are listed as "surface reasons"; the latter as "psychologic formulations."

The rationalizations offered by the men themselves cover a wide range of reasons. The diversity of reasons for overleave is indicated in the following list of responses:

No reason.
I do not like my present duty.
Sickness in the family.
I got drunk.
Not enough leave—no leave.
Trouble at home.
I objected to restriction.
Wanted to visit family.
Became nervous on the job.
Do not like the Navy.
Didn't get proper medical care.
I was homesick.
I wanted to have some fun.
I wanted to see wife and baby.
I wanted to get married.
I got sick while on leave.
Couldn't get along with officers on ship.
I felt like staying over.
Seasickness.
Fear of the sea.
I overslept.
I didn't like the ship I was on.
Train was delayed.
Can't stand work on the ship.
Wanted foreign duty.
Requested sea duty.
Didn't like Navy regulations.

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I am a homosexual.
 Trouble with shipmates.
 Thought they were trying to frame me.
 No opportunity for advancement.
 Mother kept me home—under age.
 Afraid of combat.
 I am best suited for civilian work.
 I thought I wouldn't get caught.
 Detained by civil police.
 To see girl friend.
 Can't keep away from girls.
 Didn't want foreign shore duty.

Some rationalizations observed are patently neurotic reactions as seen in the complaint that the officers on a ship "looked scared" (a projected anxiety), or a fear of the monotony of the sea (insecurity). Others are immature aims, as a wish to be in the Pacific theater rather than the Atlantic theater or the reverse; the wish to have some fun, and the like. In spite of the apparent heterogeneity of the surface reasons, a closer scrutiny indicates that the basic psychologic formulations are not so widely divergent as might at first appear.

In examining the emotional dynamics of the situation at the time of the offenses of this psychiatrically "normal" group, we find a somewhat different alinement of motivations for "going over the hill." In the following groups the formulations were based on a reconstruction, from case histories and examination, of the emotional situations underlying the offenses in the same sampling of cases.

Psychologic Formulations for Absence Over Leave

1. Reactions based on emotional problems:
 - a. Anxiety producing (hidden) antagonism toward authority and discipline.
 - b. Reaction to passive dependency—"separation anxiety."
 Displaced reaction to emotional deprivation with infantile elements, including panic reaction to sea, to ship, to combat.
 - c. Displaced frustration from marital and home problems.
 - d. Aggravation of feelings of inferiority.
 - e. Psychic invalidism (malingering) and hysterical conversion symptoms.
 - f. Anxiety reactive to homosexual impulses.
2. Reactions based on personality attitudes:
 - a. Emotional and social immaturity.
 - b. Willful, negative attitude toward Navy.
 - c. Egocentric, narcissistic character.
 - d. Open expression of antagonism toward authority.
 - e. Adolescent rebelliousness—good prognosis.
 - f. Accidental.
 - g. Negative.
 - h. Unascertained and incomplete.

The question to be answered was, what were the driving forces, envisaged in terms of emotionally toned impulses, that were responsible for desertions among these "psychiatrically well" individuals. At the outset it appeared that, with a knowledge of the requirements of war, with months or years of association with strict naval dis-

cipline, and with pride in the uniform and traditions of the service, only impulses related to strong emotions could impel so many men into the act of desertion. However, strong effective motivations have not always been found in this series of cases. Frequently the mere discrepancy between the values that the immature or egocentric individuals have and those of the service, was the basic force making for disciplinary breaches. Reactions of antagonism toward authority springing from conscious attitudes of defiance, based on immature social values as well as on deeper personal, perhaps unconscious, emotional reactions, proved almost as frequent. These two classes of motivation will later be discussed in detail.

In general we could subsume these reactions under attitudinal or emotional reactive headings. The general conclusions to be drawn from these psychologic formulations are that the basic difficulty in desertion and similar offenses lies in (1) the overt and behavioral reaction to anxiety induced by frustration of some sort, and (2) an anti-authoritarian attitude.

Reactions based on emotional problems.—Although the emotional dynamics underlying the several behavior reactions which eventuate in seamen going A.O.L. are clear in most cases, it is not easy to demonstrate clear-cut clinical pictures. Thus group 1 a, "anxiety producing antagonism toward authority and discipline," is allied to group 2 e, "adolescent rebelliousness—good prognosis," with the exception that the display of antagonism arouses guilt feelings and hence anxiety in the former. Group 1 b, "separation anxiety," represents an important complex of dynamic situations which proves to be the nuclear emotional problem of many of these individuals. Group 1 c comprises displaced neurotic reactions with every sort of variation, similar to those gathered under group 1 b.

In group 1 d, previously unnoticed inferiority feelings become aggravated to the point of clinical entities; they partake also of some of the elements of group 1 b, but have their own specific psychologic causes. Group 1 e, "psychic invalidism," likewise gave neurotic reactions in men who previously considered themselves well and who then showed subclinical entities. Here again the separation anxiety described under group 1 b was frequently a factor. Group 1 f, "anxiety reactive to homosexual impulses," is self explanatory.

The highly individualistic character of reactions should be emphasized. These are based on emotional problems which nevertheless have enough consistency of underlying psychopathosis to be recognizable. Hence we have chosen for description the outstanding type of psychopathologic process encountered which is best described as *separation anxiety*.

It is not intended to rename the condition which has been variously called war neurosis, war hysteria, or combat fatigue. The phrase "separation anxiety" merely denotes a well-defined group of anxiety manifestations having a common psychopathologic basis. In this sense separation anxiety is a symptom, not a new disease. English military psychiatrists (2) have been particularly impressed by the appearance of separation anxiety among their fighting men during and after battle. Like many psychologic symptoms in response to emotional trauma, separation anxiety may appear at some distance in time following the trauma. Thus separation anxiety was noted by men in training stations, on the battle front, in active combat and in some areas far from the scene of aggressive activity.

In this study we have encountered its symptoms as anxiety attacks which have on occasion been prolonged and which were sometimes expressed in psychosomatic symptoms. Headache and dizziness were predominating symptoms. The headache varied in type, usually frontal or temporal, and was increased by activity or bending. Often history of a former head injury which was quiescent for several years is held by the enlisted man to account for the headache. Medication with analgesics provided no relief, nor did placebos help the complaint. "Black-out" spells, and fainting attacks, occurring especially at night, were frequent symptoms. Careful examinations never revealed organic neurologic signs; the attacks were not epileptic. The fainting was always associated with dizziness which did not respond to medication. Often these cases are considered instances of malingering because there are no obvious medical causes and no positive medical or laboratory findings. Clinically these cases often occur in men of slight physique whose symptoms might be considered by some as being those of a constitutional psychopathic state.

Another psychosomatic symptom is back pain which suggests sacro-iliac sprain. It may last weeks to months without any history of injury or any clinical signs of spondylitis. The backaches are associated with headache and have the same general characteristics. Cardiac neurosis and symptoms of gastric neurosis were not especially common in our series. Only an occasional case of palpitation was noted, although abdominal pain without organic basis or serious bowel dysfunction has been observed.

Enuresis and preoccupation with sexual problems were fairly frequent occurrences. These subjects often were enuretic on shipboard only after they had been on the sea for awhile. The sexual problems were more pressing. Worry about masturbation and a fear of being impelled to homosexual attacks on shipmates while in the disciplinary barracks were prominent. The subjects insisted on bringing it to the medical officer's attention as a symptom of their illness.

Another symptom was the wish to be alone, added to an intolerance to the noise incident to barrack or shipboard life. Frequently this intolerance took the form of extreme irritability, a wish to fight those about them. Some of the subjects felt they could not tolerate any noise, and were in a state of agitation after a night in the dormitory, even requesting solitary confinement.

A corollary of this irritability with shipmates is an impulse to destroy objects, or to become "wild" and belligerent, though this latter was not always expressed in actual physical combat. Frequently they indulged in fantasies of a boyish type directed against officers or shipmates, boasting about what they would do to them. These mutilating, destructive fantasies came and went at intervals during the day and especially at night and were complained of as annoying to the patient who experienced them. As might be expected the irritability was associated with anxiety attacks, which were especially irritating at night and were combined with insomnia. Nightmares were very frequent, the dreams having an almost constant element of injury and destruction to self and others.

Our experience has shown that the dynamic situation behind this condition is the inability to be away from home. The insecurity developed by separation from home—which appears as anxiety symptoms—can be tolerated for awhile but soon overwhelms the subject. The anxiety can be considered as a sign of the degree of insecurity experienced by the ego. When the emotional implication of the fact of separation from home breaks past the ordinary conscious defenses, such as promise of adventure, novelty of sea duty, pride in the service, or competitive spirit with shipmates, feelings of insecurity and often anxiety or panic ensue. The subject "cannot stand" being away from home at a station or at sea. Regression results in that the subjects behave as if they could not live and carry out their service responsibilities. The symptoms can be considered as a conversation mechanism, whether they be psychosomatic complaints or regressive behavior patterns.

Thus the spectrum of symptoms ranges from anxiety to enuresis, from dizziness and headache to childish irritability which "prevents" the proper performance of their duties. Why there is an inability of the ego to withstand feelings of insecurity in the face of emotional deprivation is a highly individual matter which depends upon the emotional conditioning by the parents of the individual during his early years.

Cases of intolerance to separation from mother and home were rarely found to be uncomplicated. There was almost always added some fraction of hostility against a parent. This hostility, we have learned, is a defense against deep dependency needs which the ego cannot express freely. Frequently this hostility is transferred to the Navy

and its officers, or to an indifferent object such as the sea, the individual claiming intolerance of the monotony of sea life. The presence of hostility links persons with separation anxiety with those whose behavior was featured by anti-authoritarian attitudes. Seasickness often is a mask for hidden hostility. An example of a dependent youth who showed marked separation anxiety with a moderate accompanying hostility reaction is illustrated in the following case:

CASE REPORTS

Case 1.—An 18-year-old seaman was in the Navy 5½ months before he went A.W.O.L. for 59 days. During his first 7 weeks at training camp he adjusted, but at a specialty school during the next month he became nervous, unable to concentrate and fell down in his work markedly. While in transit with a draft of men to a port, his train passed through the railroad station of his home town, and he was seized by an impulse to get off the train.

While at home he felt more comfortable, and spent his time with his mother and with girl friends. He said that he went home to straighten things out because he knew he would be going to sea. Underlying this rationalization was a strong wish to be with his mother and to "settle things" with his father, i.e., ameliorate his guilt toward the latter. He spoke constantly of his wish to become engaged to a girl, so he could have some tie when he went to sea.

On first examination, the subject described an episode of neurotic confusion with nervousness and uneasy feelings during his period in the specialty school, ending with his impulsively jumping off the train before his draft had reported to the new station. The subject was restless and talked with an overcompensating sense of self-confidence which soon passed, revealing a dependent, insecure youth. He gave a history of rages over little things, directed at both parents. He fights frequently and usually loses. He states that he is a great worrier about details. He is intelligent and has an interest in mechanical things.

His mother was described as an overprotecting individual; his father was apparently a neurotic person with whom the subject was constantly at odds over petty matters.

The subject was an only child. Both parents tried, one in an indulgent way and the other behind a screen of rivalry (father), to fashion his life. The interplay between father and son appeared to be due to the unconscious wish of the subject to taunt his father into giving him more love.

Three months after initial examination the subject presented a better picture of adjustment and seemed eager to return to sea. There were still symptoms of separation anxiety, such as occasional nightmares and an adolescent attitude of cocksureness which compensated for his inner insecurity. The immediate stimulus of his separation anxiety panic was the circumstance of his imminent sea duty. His great fondness for dogs and his almost obsessive drive for a fiancée are indicative of his great desire for love. The basic impulse to absent himself from service was based on deep emotional deprivation centering around the home. A few sessions during which this problem was thoroughly discussed, provided sufficient insight on emotional support to allow him to return to duty with the prospect of being able to adjust.

Reactions based on personality attitudes.—In the present state of psychiatric experience, the group featured by

immaturity and aggressive feeling toward authority (2 a and 2 e), cannot be regarded as fixed personalities in the way we regard the psychopathic personality. The anti-authoritarian groups, 2 b and 2 d, are independent, self-willed, follow no orders, insist on "having fun" at their own convenience, and have an openly expressed hatred of their officers. The egocentric characters, group 2 c, shade off on the one side to so-called criminal psychopaths, and to rebellious, immature adolescents on the other. This behavior is motivated by a specific negative attitude toward authority, combined with an admixture of neurotic elements. Those men who "go over the hill" because they strongly dislike the Navy, show on examination evidences of neurotic reaction toward their parents. Further probing demonstrates that underneath their uncooperative, arrogant attitude toward authority, dependency needs exist which are quite similar to those occurring in the first group discussed, namely, reactions based on emotional problems.

Submission to authority is considered to be a weakness, and antagonism toward authority is a reaction hiding from the individual the existence of passive, dependent elements in his makeup. In the psychopath, this aggressive component becomes fixed in the character; in the rebellious adolescent there is still enough elasticity of the ego to allow the aggressive defense against submissiveness to be neutralized under the pressure of contact with older men. The particular prognosis of each individual as far as the naval service is concerned, depends on his ability to mature. From a psychologic point of view our finding is significant in that in these antagonistic men a deep current of insecurity exists. One piece of evidence is the frequent occurrence of aggressive impulses turned toward the self which appears in the form of self-destructive fantasies, suicidal attempts, existing along with truculence and hatred for the Navy.

The mixture of expressed anger against authority and introjected anger within the self, appears in various proportions in the case material. The emotional currents range in their expression from cases showing simple separation anxiety to persistent hatred against the Navy. Although the latter group appears to be psychopathic with a chronically antisocial attitude, closer scrutiny provides a key to the meaning of the psychopathy demonstrated. It becomes clear that hatred against the Navy masks deep anxieties. The following case will illustrate the point.

Case 2.—A 19-year-old enlisted man was brought to the disciplinary barracks after absence over leave of 5 days. He stated that he "hated the Navy," and "hated gold braid." He had been in the Navy more than 2 years, having served at sea most of that time. He had had 12 offenses in the Navy, some of them of a serious nature. At one time he was said to have struck a warrant officer and another time he attacked and "beat up" a commissioned officer while on shore. In civilian life he had been ar-

rested six times for offenses ranging from vagrancy to suspicion of felony, but there were no prison sentences.

Upon arrival at the disciplinary barracks he stated clearly that he wished to be discharged from the Navy and therefore went out of his way to disobey regulations. He gave a story which, if true, indicated a severe psychopathic condition in which sadistic elements were prominent. He said his time was spent in thinking, plotting and planning to kill people with whom he had had even petty misunderstandings. He had a particular dislike for officers, and had already beaten up two of them unmercifully. He had numerous contacts with homosexuals in which he robbed them of their money. He said that he felt like murdering anyone whose blood he saw shed. When he tried to stop the bleeding nose of his brother he became infuriated and a relative watching the episode pulled him away in alarm. There was a possibility that considerable fantasy admixture was present in his story. He was restored to duty aboard ship but was immediately A.W.O.L. for a period of 21 days after announcing that he wished to be discharged from the Navy.

In his daily contact with the examiner, he showed more depression as it became clear to him that his wish to be discharged from the Navy by breaking the rules would not be countenanced. He showed signs of depression, spoke about crushing his foot under a truck, of cutting off his fingers so that he would be disabled and hence be discharged from the Navy. He said that while on his last A.O.L. he had wandered around the streets, sleeping in railroad stations, and playing with the idea of jumping under a train to end his life. He wrote to his mother saying she would hear from him no more, and planned never to see his wife again.

Shortly before he was apprehended he met a girl who said she had syphilis, and he purposely had intercourse with her in order to contract the disease. During later interviews he expressed great feelings of debasement, refusing to be treated for a penile lesion in the hope that it was syphilis and it would invade his blood stream. He said he wanted to live a reckless life, devoted to doing what he pleased without regard to civil authority. He would rather lose a hand than stay in the service and obey the naval authorities. During the later depressed period when he entertained self-destructive ideas, some of his antagonism toward the officers, expressed in speech and indicated in behavior, diminished.

COMMENT

The study of enlisted men who for varying periods have deserted the Navy in wartime has brought several factors into the foreground. The majority of these individuals go "over the hill" for two reasons. The first of these is the presence of an emotional conflict which is displaced onto the Navy. The second is the evoking of underlying antagonism toward authority by the regulations and discipline of the Navy.

Most military psychiatrists agree that fear is present in all normal fighting men. They also agree that the underlying personality of the soldier or sailor is a strong factor in determining whether the ego of the enlisted man will become so inundated by fear and neurosis as to become unusable in the service. As Raines and Kolb (3) have pointed out, no one has yet been able to formulate criteria

for diagnosing neuroses in men, who though clinically well, are predisposed to war neurosis.

We found in this series that the basic problem in the personality of men who go overleave is a combination of dependence needs and antagonism toward authority on which fear reacts to produce untoward behavior. The finding is again repeated, that emotional immaturity, which dips into marked passive dependence on the parents and home, usually symbolized by the mother, provides the neurotic background which turns normal fear into flight and dissatisfaction into desertion.

These cases have shown a wide range and combination of dependence needs and antagonisms in each individual offender. It can be said, from our experience, that no desertion occurs without an anti-authoritarian attitude, open or hidden, existing along with a need for protection and dependence, whether covered by anxiety or compensated for by toughness.

The problem which presents itself then is the mitigation of these two forces to the end that desertions and absence over leave will decrease. It is to be borne in mind in this discussion that we have excluded all types of disease which could be so diagnosed and deal solely with individuals who are "normal" psychiatrically. Emotional immaturity has two potent counterforces, i.e., time, and the emotional support of new figures in the environment. Naval experience agrees with that of Army observers who find that the military organization and war supply psychologic factors to temper men (4). The tempering of the average man, i.e., his adjustment to military service, goes on gradually during the first year or so of military life. Modifications of old values, supplanting of emotional ties by new bonds, and the gradual submerging of the individual's personality, become perceptible as the average recruit develops into a fighting man.

How can the process be aided in the immature youth in whom it does not occur spontaneously? It is best accomplished by minimizing the threat of danger evoked by the man's way of interpreting his leaving home for the service.

In this process a vital factor is the emotional tone of the officers, both line and staff, who are in contact with the man. It is the officers who act as therapists, whether they are aware of it or not, who furnish the emotional nourishment on which the enlisted man feeds. This is the only technic of treatment which is feasible in the present naval setup. It has been our practice through firm yet understanding discussion with the men, to attempt to offer this emotional background. The contact should be brief, pointed, but not critical, and above all, must be persistent. At the same time that emotional support is given, rationalizations, excuses, incorrect emphasis and even the tem-

porary paranoid projections present in any large organization must be swept aside.

Even in the case of men who are repeaters, and who avow that they do not like the Navy, it is felt that repeated therapeutic contacts—when backed by the authority of the Navy—will prove of value in time in immature individuals. But long before the maturing influence of military service can be brought to bear, the more potent forces of his community in general and his parents in particular, have been operating on the dependent, immature, neurotic youth.

Reviewing the situation regarding youths with an outwardly anti-authoritarian attitude, the same considerations come to mind. It is interesting that adolescents in this country are emotionally toned against the war even at this time. Sherman (5), who surreptitiously examined 7,000 high school children in Chicago regarding their attitude toward the war, found that 53 percent were antagonistic, critical, indifferent or confused about this country's place in the war.

Since the exigencies of the war and the naval service prevent starting any long-scale program, it becomes evident that more immediate measures should be instituted. From the standpoint of the present problem, a longer period of basic training and indoctrination appears to be the only method of enabling us to modify the noticeable dependence of so many recruits.

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CHAPTER 33

THE PSYCHOTIC NAVAL PRISONER*

It is the purpose of this paper to consider the naval prisoner who is hospitalized because of a psychosis. Despite screening procedures there are admitted to the service many men who seem unable to conform to the requirements of the group and soon become involved in disciplinary difficulties. In the majority of cases the problems to be considered are those of discipline, morale, adequate indoctrination, and intensive training in group activities. In some, however, the offense is a reflection of an inability to adjust to the group, based on intellectual or emotional defects.

In the naval service an effort is made to detect the mentally-ill offender by repeated screening at the disciplinary barracks and by medical observation at all places of detention. The presence of a mental illness in the prisoner is of great concern, as, by virtue of the illness he may be held not responsible for committing the offense, or incompetent to stand trial, or too ill to serve sentence. The psychotic prisoner is immediately hospitalized, and after a period of observation has until recently been sent to St. Elizabeth's Hospital, Washington, D. C. Such men are not committed to the hospital as "insane" but are ordered there for observation and treatment.

During the period from December 1941 to December 1944, thirty-four active duty Navy patients (2 Coast Guard, 9 Marine, 23 Navy) were admitted to the criminal division of St. Elizabeth's Hospital. All of these men were general court-martial prisoners. Some had only been recommended for general court martial, others had been tried but not sentenced, while others were actually serving sentences. The illnesses necessitating their transfer to a hospital became manifest while they were awaiting trial, serving sentence, or in many instances they were a more obvious cause or accompaniment of the offense, thus leading to early hospitalization. The men were studied by the

usual psychiatric interviews, supported by various psychologic tests and by social histories obtained from the nearest relatives.

These men were remarkable for their youth. Thirty-three were less than 30 years of age, and 12 were under 20 years. The youngest was 17 years, the oldest 42. There was only one officer in the group and of the remaining 33 only 5 were rated men (above the rate of seaman, first class, or corporal).

The majority of cases (23) had been hospitalized less than 1 month before transfer to St. Elizabeth's; only 4 had been hospitalized more than 3 months before transfer. The time spent at St. Elizabeth's was as follows: Less than 3 months, 5 cases; from 3 to 6 months, 10 cases; from 6 to 12 months, 15 cases; and more than 12 months, 4 cases. In table 65 are shown the diagnoses of this group as established after an observation period of at least 1 month.

TABLE 65.—*Diagnoses of 34 general court-martial naval prisoners at St. Elizabeth's Hospital*

Psychopathic personality without psychosis.....	5
Psychopathic personality with psychosis.....	4
Dementia praecox:	
Hebephrenic type.....	1
Catatonic type.....	1
Mixed type.....	9
Undifferentiated type.....	3
	— 14
Psychosis with epilepsy.....	1
Psychosis with mental deficiency.....	1
Undiagnosed psychosis:	
(chronic alcoholism—syphilis).....	1
(prison reaction).....	1
(inadequate personality).....	1
(affective and schizoid features).....	2
no additional descriptive term.....	3
	— 8
Psychoneurosis (mixed type).....	1
Total.....	34

* By Otto Allen Will, Jr., Lieutenant (MC) U. S. N.
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In table 66 the patients' courses in the hospital are summarized.

There is no question that all of these men had shown definite evidence of a mental illness before admission to St. Elizabeth's Hospital. Nevertheless during their stay at that hospital 11 showed no evidence of psychosis and 17 showed only minimal residual symptoms of their illnesses. Twenty-eight of these men displayed no mental abnormality that necessitated any restriction beyond that afforded by the general wards of the psychiatric hospital. The

TABLE 66.—*Course in St. Elizabeth's Hospital of 34 general court-martial naval prisoners*

Course	Number of patients
Not obviously psychotic.....	11
Uneventful (only slight evidence of mental abnormality).....	17
Grossly psychotic.....	6
Total.....	34

transfer to this hospital was made so that all of the facilities of a large psychiatric institution would be available to the patient.

In table 67 is shown the condition of the patient at time of discharge from St. Elizabeth's. The group marked "unimproved" includes 4 men who were discharged by court order in response to writs of habeas corpus prior to discharge from the Navy and thus were returned to custody in other naval facilities.

TABLE 67.—*Condition on discharge from St. Elizabeth's Hospital of 34 general court-martial naval prisoners*

Condition	Number of patients
Not insane.....	6
Recovered.....	5
Social recovery.....	5
Improved.....	6
Unimproved.....	8
Retained.....	4
Total.....	34

Many of these men had served rather short periods of active duty prior to committing the offense which led to imprisonment or hospitalization. Only 10 had over 2 years of service, 19 had been on duty less than a year, and 15 less than 6 months. The shortest period of service was 26 days, and the longest was 7 years 8 months.

In table 68 are listed the offenses committed by these men.

TABLE 68.—*Offenses committed by 34 general court-martial naval prisoners confined at St. Elizabeth's Hospital*

Offense	Number of cases
Desertion (AOL or AWOL over 30 days).....	14
Repeatedly AOL or AWOL.....	8
Homicidal assault.....	2
Striking officer.....	3
Disobeying orders, disrespectful language to superior officer.....	2
Murder.....	3
Fraudulent enlistment.....	1
Disobedience (set free prisoners under his guard).....	1
Total.....	34

Only six of the men had committed crimes which clearly indicated their serious potential danger to society and hence necessitated strict prison supervision. The crimes of these six men were as follows:

1. Murder—three cases (in two of these cases all charges had been dropped before the men were hospitalized at St. Elizabeth's).
2. Homicidal assault on a guard at Portsmouth Naval Prison.
3. Homicidal threats with knife, and previous criminal record.
4. Homicidal assault with gun during psychotic episode while on duty aboard ship.

The intelligence of the majority of these men was measured at the hospital by the Stanford-Binet or the Wechsler-Bellevue scales. In a few cases intelligence was judged by school and occupational performance or by reports of intelligence tests made at schools or other hospitals. Table 69 shows the distribution of the members of this group by intelligence.

TABLE 69.—*Distribution by intelligence of 34 general court-martial naval prisoners at St. Elizabeth's Hospital*

Intelligence	Number of cases
Mental defective.....	1 (IQ 51)
Borderline defective.....	2
Dull normal.....	8
Normal.....	18
Superior.....	3
Very superior.....	2
Total.....	34

Of this group only 5 showed above average intelligence, and 11 were rated as dull normal or below.

Through histories taken from patients and relatives an

effort was made to study the pre-service life of these men. The more significant facts obtained are listed under appropriate headings following:

The family background.—Twenty-four of the men were considered to have come from markedly unstable homes (marred by such things as alcoholism of one or both parents, divorce, illness, or parental strife). In six cases the father had deserted the family during the patient's early childhood. In five cases the father died before the patient was five years of age, and in three cases the mother had died during this period. In three instances the father was alcoholic and in two the mother was alcoholic. Fourteen of the patients spent their early life in orphanages or the homes of foster parents.

Mental illness in the family.—In seven cases the behavior of the patient's father was so unusual that it could be considered as evidence of a mental illness. Examples of such behavior are shown next:

1. Peculiar, inadequate, seclusive.
2. Alcoholic, cruel, "peculiar."
3. "Shell shocked" in World War I with residual symptoms since.
4. Cruel, alcoholic, a bully—beat his children brutally.
5. Killed wife and committed suicide while his small children stood by watching.
6. A thief—deserted family—unstable.
7. Died while a patient in a mental hospital.

One mother displayed behavior suggestive of a psychopathic personality. Another mother died while hospitalized because of an illness diagnosed as catatonic dementia praecox.

Previous mental illness.—Nine of the patients had displayed behavior that was definitely psychotic or strongly suggestive of a mental illness prior to entering the military service. These are summarized following:

1. Vague spells of amnesia.
2. Discharged from U. S. Army because of "mental deficiency and neurosis"—shortly thereafter (1942) in two State mental hospitals, where he was classified as undiagnosed psychosis.
3. Four enlistments in military service:
 - a. USMC—18 months' service—1935 given undesirable discharge after 7 months AOL.
 - b. U. S. Army—9 years' service—given medical discharge in July 1941 because of depression and suicidal attempt.
 - c. USN—4 months' service—given BCD in May 1942 because repeatedly AWOL.
 - d. USN—25 days' service—present enlistment (fraudulent).
4. Change of personality at 16 years, at which time private physicians made diagnosis of dementia praecox.
5. Frequent hospital admissions because of alcoholism and psychopathic behavior.
6. Marked mood swings.
7. Severe depression at 15 years—no medical care.

8. On several occasions saw psychiatrist who diagnosed "psychoneurosis."

9. Peculiar "spells" since age of 5 years—during such episodes was mute and exhibited bizarre behavior.

Only three of the group showed previous hospitalization because of mental illness.

Education.—In tables 70 and 71 are summarized the school records of these men.

TABLE 70.—Formal education of 34 general court-martial naval prisoners at St. Elizabeth's Hospital

School grade finished	Number of cases
Fourth grade and below.....	2
5th-8th grades.....	11
9th-10th grades.....	12
11th-12th grades.....	4
High-school graduates.....	3
1 year college.....	1
College graduate (AB).....	1
Total.....	34

TABLE 71.—Scholastic record of 34 general court-martial naval prisoners at St. Elizabeth's Hospital

Record	Number of men
Poor.....	14
Fair.....	18
Good.....	2
Total.....	34

Seven of the men were in much difficulty because of chronic truancy; 9 were behavior problems in school and gave evidence of apparent early inability to conform to group requirements. As shown in table 70, 25 of the men had less than a tenth-grade education, and only 5 were high school graduates. Only 2 men showed good or superior academic work, the other 32 being rated as fair or poor.

Personality.—An attempt was made to separate these men into groupings indicative of certain terms commonly used to describe "personality types." The classification was made on the basis of a review of the social histories, personality studies, and observations made at the hospital.

Nine of the men gave a history of enuresis beyond the age of 6 years, two being enuretic during the present illness. Four stuttered during childhood, four had frequent temper tantrums, and two suffered from night terrors.

Marital status and sexual adjustment.—Twenty-three of the men were single. Eleven had been married, but of

TABLE 72.—"Personality type" of 34 general court-martial naval prisoners at St. Elizabeth's Hospital

Type	Number of cases
"Introvert".....	24
"Extrovert".....	6
Undetermined.....	4
Total.....	34

these six were divorced, three separated, and only two were on good terms with their wives.

Twenty-seven of the men reported no gross sexual difficulties, but the study of the sexual life was admittedly superficial. Two men displayed marked conflict over masturbation; one had engaged in both heterosexual and homosexual activities and often secretly dressed in women's clothing; four apparently had never displayed any interest in sexual matters.

Antisocial activities.—Eleven of the men in this group had been involved in antisocial activities prior to entering the military service, as noted next:

1. Term for larceny—1934.
2. Threatened life of foster father and was reported to police.
3. Numerous juvenile court entries for theft, sexual advances to young girls and other petty crimes.
4. State Training School inmate—larceny.
- 5 and 6. Petty theft.
7. Grand larceny.
8. Theft and drunkenness.
9. Disorderly conduct.
- 10 and 11. Misdemeanors.

Six of the men had been regular and heavy consumers of alcohol for some time prior to committing their military offenses. None of the patients gave a history of drug addiction.

Pre-service employment record.—Two of the men had worked only on the parent's farm or in his business. Eleven had never had any regular employment before entering the military service. Nine had shown a shifting occupational adjustment. Six had made a very poor work record, giving a history of being discharged, etc. Only six had a record of steady, satisfactory employment.

COMMENT

The "average man" in this group is young, single, and below the grade of corporal or seaman first-class. He is of about average intelligence, has completed less than 10 years of school with average or poor grades and only fair behavior. He came from an unstable home—an environment poorly suited for the development of the more desirable social traits. He is "introverted," has had some minor conflicts with the law, and has never held a job for

any length of time. In the past he has shown symptoms of an unstable personality, having been enuretic beyond the age of 6 years, and being subject to marked mood swings. He found it difficult to adjust to the military service, had little motivation to support him during the difficulties of the training period, greatly resented discipline and any display of authority, and was repeatedly AOL and AWOL. He was sent to the brig and recommended for general court-martial, but while awaiting trial became depressed, tearful, seclusive, and displayed obviously abnormal behavior, with the result that he was sent to the sick bay and finally to St. Elizabeth's Hospital. At that hospital he made a good adjustment, showing little evidence of psychosis and rapidly improving in an environment that, while restricting, was not punitive. After a few months in the hospital he was given an honorable medical discharge from the service and released.

This group is noteworthy for the lack of hardened criminals and for the comparatively minor nature of the crimes. It is a serious military offense to be AOL or AWOL, but in many of these cases the infractions of rules were a reflection of the individual's long-standing inability to make any prolonged adjustment to the restrictions of his group. In civilian life only a few of these men would have been sent to a criminal institution. In nearly all service cases charges are dropped at the recommendation of a board of medical survey and the majority of these men are then discharged from the hospital as soon as the military discharge is received.

Some attention should be devoted to the group called "psychopathic personality." Like much of psychiatric nomenclature, this is a purely descriptive term, being applied to certain patterns of behavior which are manifest throughout the greater portion of the individual's life and first display themselves in early childhood. The cause or causes of such behavior are not known, but many authorities have considered "constitutional" factors to be of prime etiologic importance. It is well known, however, that similar behavior may be shown after cerebral damage from anoxemia, toxemia, or trauma. Recent studies have suggested that in some "psychopaths" there is a marked cerebral cortical dysrhythmia as demonstrated by the electroencephalogram, possibly indicative of cortical malfunction that interferes with proper social adjustments. Careful psychiatric investigation has shown that in some "psychopaths" the antisocial behavior may be explained by psychologic trauma experienced during the formative years.

It seems clear that "psychopathic behavior" cannot be explained on a single basis, but may result from one or more of a number of causes. It is probable that the term "constitutional psychopathic state" should be applied only

to those individuals whose abnormal behavior has been manifest since early childhood and cannot be explained or understood despite careful medical and psychologic investigations. We question the validity of the term when applied to those with a history of severe cerebral trauma or those who spend their early years in social environments that would be obviously detrimental to the developing personality. There were nine men in this study diagnosed as psychopathic personality. Only two of these nine had a "negative" history and might be called "constitutional psychopaths." It is interesting to note that both of these individuals were reared in foster homes. The family background of the other seven is briefly summarized next:

1. Father was a drug addict and psychotic. Patient was cared for in foster home after the age of 8. At age of 5 he was unconscious for 7 days after a head injury and skull fracture.
2. Mother and father were divorced before patient was born. He was cared for in a series of private schools, having no home life, and becoming a spoiled, egocentric individual.
3. Patient was born after prolonged labor and use of instruments. He was unable to nurse and was fed by gavage during his first year. At 8 years had encephalitis, following which he showed marked personality change. In this case there is possible cerebral injury from two causes—birth injury and encephalitis.
4. Parents were separated when patient was infant and he was cared for by unstable grandmother. There was no parental supervision; governed only by peculiar, emotionally insecure elderly female. Patient made good school adjustment to ninth grade and his behavior was more that of a profound neurotic.
5. Father died when patient was 5 years old. Stepfather was alcoholic, cruel, and abusive. Family was on relief and home life was torn by poverty, quarreling, and drunkenness.
6. Father was a "shell shocked" war veteran who deserted mother when patient was 5 years of age. Family was on relief and markedly insecure. Patient's IQ was 78. Here the patient is handicapped by poor home environment and a defective mentality.
7. Father had a violent temper, beat mother, and subsequently was sent to prison. Mother was sexually promiscuous and displayed "psychopathic" behavior. Parents were later divorced. Paternal grandfather was an alcoholic and a suicide. Patient never had security in a home which was marked by abuse and neglect.

It is very difficult in the cases listed to insist that these individuals bear a constitutional taint and are not rather products of extremely unfavorable environments. Constitution and environment cannot be (and should not be) entirely separated, but we believe that each case of "psychopathic" behavior should be carefully studied and the term "constitutional" used only with the greatest of caution.

It is interesting to note that six of the men insisted that they had "faked" their mental symptoms in order to escape punishment for their offenses. Three of these men

were diagnosed as psychopathic personality, two as undiagnosed psychosis, and one as dementia praecox, mixed type. It is not uncommon for patients recovering from a psychotic episode to state that they assumed their symptoms and were not actually ill. Such action usually seems to be the result of fear and shame, the patient preferring to be known as a malingerer than as one who was psychotic. In these men there was no evidence of malingering, as all had shown definite evidence of profound personality disorders prior to coming to this hospital.

SUMMARY

1. During the period from December 1941 to December 1944, thirty-four general court-martial naval (Coast Guard, Marine, Navy) prisoners were admitted to St. Elizabeth's Hospital, Washington, D. C. as psychotic patients.

2. Twenty-eight of these men were below the grade of petty officer.

3. Thirty-three of the men were below 30 years of age; 12 below 20 years.

4. Nineteen of the men had served less than 1 year of military duty.

5. Only 5 of the men had more than average intelligence; 11 were rated as dull normal or below.

6. Twenty-four of the men came from markedly unstable homes.

7. Nine had shown evidence of a mental illness before entering the military service.

8. The majority had less than a tenth-grade education and had made only fair or poor scholastic records.

9. Twenty-four were introverted, seclusive.

10. Eleven had previous criminal records, and only a few had a good work record.

11. In twenty-two cases the offense was AOL, AWOL, or a combination of the two.

12. In their inability to adjust satisfactorily to the military service the majority of these men displayed a chronic failure to make any lasting social ties—a reflection of rather profound personality defects.

13. These men are in need of rehabilitation, as nearly all are returned to the community when discharged by the military service.

14. An effort is being made to study each patient in terms of his personality structure, intelligence, and vocational interests. In this way these men will be guided into a suitable vocational training program when they leave the hospital, with the hope that they will thus be helped to find a more stable, productive place in society.

CHAPTER 34

A STUDY OF 200 VIOLATORS OF GENERAL COURT-MARTIAL PROBATION¹

Probably the most serious aspect of the naval disciplinary problem is that of recidivism. Personnel assigned to disciplinary barracks are well aware of this problem. Probably personnel of the psychiatric units meet the impact of recidivism more clearly since all naval offenders admitted have contacts with the psychiatric office.

Considerable interest has been shown in attempts to salvage residual manpower among the more serious naval offenders through the establishment of retraining commands for general court-martial offenders. There is yet much to be done in attempting to understand the first offenders and the recidivist for petty offenses to keep these men from becoming general court-martial cases. Confinement and court-martial procedures apparently are not the answers since these seldom alleviate the motivations back of the naval offender.

Recidivism is a serious problem and one that costs the Navy vast sums in dollars and in manpower, including that of the enlisted men confined and the enlisted men and officer manpower to care and maintain disciplinary barracks and retraining commands.

Recidivism, if not checked or its solution not determined early, will ultimately result in the general court-martial procedure—a very expensive procedure for all concerned.

This article is a study in recidivism as exemplified in 200 enlisted men who had finally been awarded a general court martial after several previous offenses, and served time and who were later restored to duty on probation and who subsequently broke probation by another offense which required further disciplinary disposition.

The term probation as used in the Navy is practically synonymous with the term parole as used in the civilian sense implying that a man who has been an offender has been returned to duty and on trial with some kind of suspended sentence over him.

Since each of these men had been interviewed by two or more members of the psychiatric office, considerable data were collected on them and form the basis for this article. A follow-up on the recommendations made by the psychiatric office is also reported to the extent of available data.

It is felt that were the motivations for the recidivism completely understood by the personnel in charge of these men, the ultimate general court martial and discharge from the service might have been avoided in certain cases, or the discharge from the service brought about sooner thus alleviating the prolonged expense.

Recidivism intimates a twofold probability: (1) that of the shortcomings of the man himself, and (2) that of the failure of the naval personnel to fully understand the man and the motivations. The clash of these misunderstandings often results in a naval recidivistic offender. The difficulties involved herein are well recognized.

The 200 probation violators considered herein were studied with the attempt to determine if possible any prognostic symptoms or traits that would aid in predicting the success or failure of the general court-martial offenders when released, or prior to release on probation or parole.

Much of the data to be used have been taken from a special questionnaire² filled out by the offenders themselves supplying information about their naval history, nature of present and previous offense, family background, marital status, educational achievement, civilian delinquency records, physical health status, stability, personal problems, and attitudes in the Navy.

¹ By William C. B. Johnston, Commander (MC) U.S.N.R., and R. Robert Otness, Lieutenant Commander H(S) U.S.N.R.

² Johnston, W. C. B.; Otness, H. R.; and Stouffer, G. A. W., Jr.: Method of psychological screening of naval offenders. Mil. Surgeon 97: 300-306, Oct. 1945.

The clinical interpretation and significance of biographical data in the understanding of human behavior in its development are well recognized by psychiatrists and psychologists who are trained to deal with human beings.

The data and discussion that follow aim to describe the backgrounds of these 200 men, presenting first certain data that have bearings on their personal life and civilian status.

Table 73 presents the geographical distribution of these men by home States. The number are somewhat influenced by the fact that the disciplinary barracks serves several southern states.

A tabulation of religious preferences indicated that 136 (68 percent) were Protestant; 54 (27 percent) Catholic; 2 (1 percent) Jewish; 5 (2.5 percent) none; and 3 (1.5 percent) others. The data indicate that this factor has little or no bearing on the present problem under investigation.

TABLE 73

State	Number
Arkansas.....	1
California.....	1
Connecticut.....	2
Delaware.....	3
Florida.....	2
Georgia.....	4
Illinois.....	4
Indiana.....	7
Iowa.....	2
Kentucky.....	6
Louisiana.....	4
Maryland.....	9
Massachusetts.....	7
Michigan.....	6
Mississippi.....	3
Missouri.....	2
New Jersey.....	9
New York.....	28
North Carolina.....	27
Ohio.....	5
Pennsylvania.....	18
Rhode Island.....	2
South Carolina.....	10
South Dakota.....	1
Tennessee.....	12
Texas.....	4
Virginia.....	11
West Virginia.....	9
Washington.....	1
Total.....	200

Age.—The age distribution of these men revealed that the average or mean age was 22.12 years, median 20.77 years, and mode at 19 years. The age range extended from

age 16 to 17 up to and including 36 to 37 years, being somewhat skewed toward the younger ages as would be expected.

Family background.—The following briefly summarizes some interesting facts concerning the family and home status. The impact of these factors in shaping their lives is well recognized by psychiatrists and psychologists. It is equally important in understanding the actions of naval offenders since home attachments play such a large role in the motivations for offenses.

Of these 200 men there were 51 (25.5 percent) whose fathers were not living and 37 (18.5 percent) whose mothers were not living. Thirty-five (17.5 percent) of the families were divorced or separated. Twenty-two cases reported a stepfather living and 16 a stepmother living. There were 49 (24.5 percent) who reported that they did not have happy homes as boys growing up. Seven were raised in an orphanage or foster-home.

The influence of home instability in the personality adjustment of civilian delinquents is well known and may be just as real with the offenders in the Navy where this factor has perseverated.

These 200 men were from families where they had brothers and sisters ranging from none to 9. There were 425 brothers, 445 sisters, 52 half brothers and 51 half sisters, a grand total of 973 siblings or at an average rate of 4.8 per man. There were 12 "only children" and 2 "only children" with half siblings.

This factor in relation to the parental situation may explain the poor adjustment in the Navy of certain men who are obligated to care for a family.

Educational background.—The highest grades completed and reported by these men ranged from 3d through 14th or sophomore in college. The mean or average grade of schooling was 9.3, median being 7.6 and the mode at 8th. This compares well with that of 1,000 unselected naval offenders.

The total number of grades completed for the group was 1,640 and the total time spent in school in completing these grades was 1,859 years, revealing an educational progress retardation of 219 years or at about 1.13 years per person.

Thirty-five percent of these men reported that they did not learn well in school and 42 percent stated that they "played hookey." These data indicate some early manifestations of instability and nonconformity to a routine related both to mental and personality aspects.

Reasons for quitting school.—The various reasons stated were reclassified into the groupings shown in table 74.

TABLE 74

To work.....	118
Economic.....	18
Financial.....	6
Death of parent.....	3
Illness of parent.....	1
Separation of parents.....	1
Delinquent aspects.....	3
To join armed forces.....	2
To join CCC.....	2
Difficulty in learning.....	4
Lack of interest.....	15
Illness and nervousness.....	3
To get married.....	2
Graduation.....	6
"No reason".....	4
No information.....	2
Total.....	200

From table 74 it becomes quite apparent that the pressure of home problems has been experienced by many of these men early in life. It is also recognized that there is a tendency to project the reason for poor school success on the home situation.

Civilian delinquency.—That many of these men had had difficulty in adjustment in civilian life prior to the Navy is indicated by the data in table 75. Fifty-eight per cent of these men showed early delinquent tendencies through truancy.

TABLE 75

	Cases		Times
	Number	Percent	
Played hookey.....	116	58	
Trouble with cops.....	44	22	
Juvenile courts.....	32	16	
Arrested.....	71	35.5	381
In jail.....	53	26.5	335
In reform school.....	6	3	7
In civil prison.....	5	2.5	5

It is noted that of the 71 men who reported arrests there were at least 381 arrests reported or at a rate of 5.3 per man. The number of times ranged from 1 to 75. The 53 who had been in jails had been in a total of 335 times or at a rate of 6.3 times per man. Number of times ranged from 1 to 75.

These data indicate that with many of these men that some form of delinquent attitude or behavior has perseverated in their character since childhood and it is no special surprise that maladjustment in the naval service has resulted.

Traits of the psychopathic personality type are observed in the listing (table 76) of the kinds of civilian offenses reported by the man himself. This list as reported by the men themselves is assumed to be very incomplete but it does give a general cross section of the offenses committed. Ninety-three offenses are reported and thirty-eight kinds.

TABLE 76.—Summary of civilian offenses reported

Offenses against the person:	
Fighting.....	1
Assault and battery.....	1
Drunk and fighting.....	1
Fighting in movies.....	1
Rape and stealing.....	1
Hit and run.....	1
Offenses against property:	
Stealing bicycle.....	1
Robbing and stealing.....	1
Stealing.....	7
Stealing and drunk.....	1
Burglary.....	2
Receiving stolen goods.....	1
Breaking and entering.....	2
Larceny.....	1
Robbery.....	2
Steal car.....	1
Entry.....	1
Miscellaneous offenses:	
Drunk.....	18
Drunk and disorderly.....	2
Late hours.....	1
Investigation.....	1
Bad conduct.....	1
Gambling and fighting.....	1
Drinking.....	6
Hauling liquor and drunk.....	1
Drunk and reckless driving.....	3
False arrest.....	1
Jail breaking.....	1
Speeding.....	6
Driving without license.....	1
Running away from home.....	3
Truancy.....	2
Reckless driving.....	3
Bad check.....	1
Disorderly conduct.....	3
Breach of peace.....	1
Juvenile delinquency.....	1
No draft card.....	1

Marital status.—Of these 200 cases there were 87 who were married with 44, or 51 percent, of them with a total of 91 children or at the rate of 2.06 per marriage. Forty-three, or 49 percent, have no children reported. Of this married group 65, or 74 percent, reported being happily married while 22, or 26 percent, were not. Ten men reported they were divorced or separated.

PHYSICAL AND PSYCHOBIOLOGICAL STANDARDS AND EXAMINATIONS

PREVIOUS MILITARY BACKGROUND

TABLE 77

	Number	Type of discharge		
		Honorable	Dishonor- able	Bad con- duct
Navy	2			2
Army	4	4		
Merchant Marine	1	1		
CCC	23	16	7	
National Guard	1	1		
Total	31	22	7	2

Table 77 summarizes the types of previous military service these men reported along with the type of discharge obtained. These data indicate the poor adaptation that some of these men have made previously to military life and has a bearing on their present adjustment in the Navy. Thirty men reported 31 previous military services.

NAVAL BACKGROUND

Status.—Thirty-five, or 17.5 percent, of these men were Regular Navy and 165, or 82.5 percent, were Reserve. Of these 117, or 58.5 percent, were enlisted while 83, or 41.5 percent, were drafted. These figures are probably not too significant in the analysis of the offender when the proportions are considered for the total Navy.

Distribution by rates.—Of the 200 cases there were 194 who were in the nonrated branch of the Navy while 6 men were rated. (See table 79 for distribution.)

That the nonrated men predominate may suggest some psychological factor in the field of incentive. The importance of proper classification of men in accordance to their abilities and interests need not be elaborated upon here. This is a fundamental consideration in human engineering. The nonutilization and nonrecognition of a sailor's talents often lie at the bottom of a disgruntled sailor's attitude.

TABLE 78

Months	Distribution of service (months)			
	Total months in service	Months sea duty	Months on shore, U. S. A.	Months overseas shore duty
84.....	1			
74.....		1		
68-70.....	1			
65-67.....				
62-64.....				
59-61.....	1			
56-58.....				
53-55.....				
50-52.....	2			
47-49.....	3			
44-46.....	1	1		
41-43.....	1			
38-40.....	4			
35-37.....	5	2	1	
32-34.....	10		1	
29-31.....	20	1	3	
26-28.....	10	1		1
23-25.....	22	1	4	
20-22.....	26		5	
17-19.....	19	3	5	
14-16.....	28	1	15	
11-13.....	37	2	13	1
8-10.....	9	6	16	
5-7.....		10	3	1
2-4.....		18	1	2
0-1.....		1		
0.....		19		62
Total.....	200	67	67	67

TABLE 79

Nonrated	Number	Percent
S2c.....	160	80
S1c.....	6	3.0
F2c.....	14	7.0
F1c.....	3	1.5
StM3c.....	1	.5
StM2c.....	8	4.
HA2c.....	2	1.0
Total.....	194	97.00

Rated	Number	Percent
GM3c.....	2	1.0
CM3c.....	1	.5
SC3c.....	1	.5
SSMC3c.....	1	.5
MM2c.....	1	.5
Total.....	6	3.0

Analysis of service (in months).—Due to revisions of the questionnaire used in obtaining information on these men, complete data were not available on the break-down of the months of sea duty and oversea shore duty. Table 78 presents a cross section of these data revealed by the data so obtained.

The mean or average length of service for these men was 22.4 months, with approximate range from 8 to 84 months.

The mean length of sea duty was 10.2 months for a sample of 46 men, the range being from 2 to 46 months.

A sample calculation on 67 men indicated an average of 15.1 months spent on shore in the United States.

Highlights of sea duty.—The data in table 80 briefly summarizes some factors relative to the nature of the sea duty. In individual cases these factors are significant in understanding the motivation back of offenses. Experience

with naval offenders has found that many offenders are victims of some residuals of combat or operational neurosis and they have run away from the aggravating factors.

Place of present offense.—It is of interest to note that of these 200 offenders there were 31 who committed their last offense and broke probation from a ship and 169 from some shore station. This is partly due to the fact that men are not always accepted well back aboard ship after being an offender and this is very contrary to the rehabilitation efforts that are made with them while ashore. The policy of restricting men from liberty at shore stations after they have been released from long confinement also explains many of these probation violators.

Summary of previous offenses.—This section summarizes briefly the number of offenses reported by the men on the questionnaire. It is felt that this number is a bare minimum and that it is very likely that there are many petty offenses that were not listed.

These 200 men reported 702 offenses on their records or at an average of 3.5 offenses per man. One man reported 16.

The great costs of the courts martial and confinements alone with this group of men need not be elaborated upon for their significance. The problem and cost of naval recidivism are evident from the figures reported in table 81. These data, indeed, raise the great importance of analysis and treatment of first offenders with the hope of alleviating the underlying motivations to forestall recidivism in the Navy.

Physical and health complaints.—With confined men it is not surprising to find a preponderance of complaining men. It is recognized that many of these complaints are organically justified. It is also recognized that many are psychosomatic in type precipitated by the demands and restrictions of the confinement. Men frequently resort to complaints to avoid duty and work as well as to satisfy

TABLE 80

		Number			Number	Percent
In combat?	{ Yes.....	62	Shore battery?	{ Yes.....	19	9.5
	{ No.....	138		{ No.....	181	90.5
	{ Atlantic.....	43	Ship hit?	{ Yes.....	20	10
Where?	{ Pacific.....	15		{ No.....	180	90
	{ Both.....	4	Sunk?	{ Yes.....	5	2.5
With enemy ship?	{ Yes.....	19		{ No.....	195	97.5
	{ No.....	181	Survivor?	{ Yes.....	6	3
Enemy subs?	{ Yes.....	45		{ No.....	194	97
	{ No.....	155	Survivor leave?	{ Yes.....	4	2
Enemy planes?	{ Yes.....	32		{ No.....	196	98
	{ No.....	168				

TABLE 81.—Summary of total offenses reported

Number of offenses	Number of cases	Total offenses
16.....	1	16
8.....	1	8
7.....	3	21
6.....	7	42
5.....	29	145
4.....	46	184
3.....	60	180
2.....	53	106
Total.....	200	702

their craving for some sort of sympathy and individual consideration as an attempt to rationalize and minimize their offense and confinement on a pity basis.

Of the 200 men herein studied 115 of them registered physical and health complaints when admitted to the disciplinary barracks. A total of 178 complaints of 52 kinds were reported. The list suggests both the organic and psychogenic factors. Sick call privilege is extended to all men.

A sampling of men revealed that approximately 40 percent reported a history of operations, serious illnesses and accidents. There were 45 percent who reported trouble sleeping and 52 percent who considered themselves as nervous persons.

Attitudes in the Navy.—Certain deductions about the personality of these men can be made from the analysis of the attitudes expressed toward the Navy. This is an important factor in understanding recidivism. Whether or not the Navy is responsible for these attitudes is a moot question. In any event the reshaping of antagonistic attitudes is a difficult problem and has many naval administrative implications. The force of attitudes in relation to efficiency is a well recognized factor.

Reasons stated for breaking probation.—From a prognostic point of view the reasons or motivating factors back of breaking probation are very important considerations in the salvage of naval offenders. Some of these men reported multiple reasons. The reliability of these reasons might be questioned in individual cases. There were 212 reasons reported from 192 men. Eight men gave no reason.

The reasons were grouped into three classes on the basis of what seemed to be the immediate causes, namely, (1) home and family; (2) personal or self; and (3) the Navy.

The groupings strongly indicated the pressure of home and family (44 percent), and personal or self (33 percent), while the Navy accounted for about 23 percent of the reasons.

These trends suggest the need of giving these factors their full reliable significance in the handling and restoring to duty of this group of men.

Very often the confinement with its accompaniment of loss of pay and the allotment to the family merely aggravates the causes for recidivism when it is associated with home and family adjustment problems. Since the pressure of home problems is greater than the sense of duty, it is not surprising to have men break probation through becoming disgusted and disgruntled alone.

Personal or self reasons are often on a neurotic or psychoneurotic basis which are not unusual observations among the psychopaths and the emotionally unstable.

The reasons grouped under the Navy suggest problems in the fields of classification and assignment and the impact of administrative policy toward these men.

The reasons given are shown in table 82 under their respective headings.

TABLE 82

Home:	
Family illness	28
Family deaths	1
Marital disharmony	10
Home conditions	19
Homesick for family.....	33
Financial	1
Personal or self:	
Drinking	23
Disgusted	2
Overslept	3
Disobedience	1
Personal	2
Fear of sea.....	8
Missed train	3
Theft	1
To have good time.....	4
To get married.....	3
To see girl friend.....	2
Sexual deprivation	3
To visit brother.....	1
Can't stand crowds.....	1
Assault and robbery.....	1
Join Merchant Marine.....	1
Physical health	11
Navy:	
No liberty	26
Refused emergency	1
Wants BCD	1
Wants sea duty.....	3
Mistreatment	7
To get out of Navy.....	6
Did not want oversea duty.....	1
Dislike duty	3
Dislike Navy	1

Psychiatric evaluations.—As has been stated previously each of these men had been interviewed by at least two members of the psychiatric office. An evaluation of the total man was made relative to his value for the naval service. Since the interviews often revealed a history loaded with instability and psychopathy, it became obvious that many of these men should not have been restored to duty following their confinement by sentence of general court martial.

The psychiatric evaluations and recommendations made on these men following their breaking probation indicated that 176 or 88 percent were of no or little additional value to the Navy while 26 or 12 percent were considered of sufficient value to recommend restoration to duty for another trial.

The impression obtained from interviews with naval

offenders suggested the futility of confinement in reshaping many of these men into valuable material for good naval service since confinement does not alleviate or eradicate the motivating recidivistic factor.

It is again emphasized that these psychiatric evaluations with recommendations were made prior to the Captain's Mast for the offense that broke the probation.

Outcomes of Captain's Masts.—Each of these 200 men appeared at Mast for the offense that broke the probation. The outcomes or "readoffs" of the courts are summarized in table 84.

From the table it is noted that 17 men were handled by an additional court less than a general court martial and were restored to duty. Thirty-two men were ordered to serve additional time and then restored to duty. Hence, from the 200 cases there were 49 cases who ultimately were

TABLE 83

		Number	Percent
Like Navy?.....	Fine.....	53	26.50
	Fair.....	104	52.00
	Not at all.....	43	21.50
Like duty?.....	Fine.....	40	20.00
	Fair.....	85	42.50
	Not at all.....	75	37.50
Getting along?.....	Fine.....	11	5.50
	Fair.....	61	30.50
	Not at all.....	128	64.00

TABLE 84.—Summary of dispositions following the Captains' Mast

Sentence	Dishon- orable discharge	Bad con- duct dis- charge	Proba- tion re- voked	Proba- tion and back to duty	SCM	Deck	Mast	Total
Years:								
15.....	1							1
4.....	4							4
3.....	36	3						39
2½.....	2	1						3
2.....	27	12						39
1½.....	1	4						5
1.....		3						3
Months:								
11.....								
10.....		1						1
9.....		1		2				3
8.....		2		1				3
7.....				7				7
6.....				9				7
5.....		1		6				9
4.....				6				6
3.....		1		1				2
Total.....	71	29	50	32	3	3	10	198

Note: 1 case had escaped, and 1 case was dismissed.

restored to duty. This would indicate that about 75 percent of naval offenders violating probation on a general court martial are judged by the courts as poor material to restore to duty while the psychiatric evaluations places this at 88 percent. The further adjustment of these men when restored to duty is not known at the time of this study, hence the reliability of the judgments and evaluations of the courts are not known. Many of the men were still serving time while this study was being completed.

SUMMARY AND CONCLUSIONS

This study has been an attempt to unfold some prognostic factors from the backgrounds of 200 General Court Martial cases who had broken probation that might be helpful in the selection or recommendation of future cases who are serving time on General Court Martial offenses and are being considered for restoration to duty. The conclusions strongly indicate that there is no single factor, or even a group of selected factors, that can be used with 100-percent prediction. The aura of the interview, the evaluation of the total personality of the man by trained interviewers in relation to the facts of the background have a greater predictive value. However, the factual side of this study suggests the following as important considerations in deciding against restoring a violator of a General Court Martial probation back to duty:

1. *Home background.*—Unstable home with large families; disharmony between parents; separation and divorce; unsatisfactory foster home placements.

2. *Marital.*—Disharmony; inadequate wife to cope with family problems; unfaithfulness on part of wife and neglect of children.

3. *Civilian delinquency.*—Background of truancy, juvenile courts, reform school experience, civilian arrests.

4. *Educational.*—Poor school success because of poor adjustment to routine; mental subnormality and subsequent frustration in Navy; poor utilization of good ability and training by Navy in relation to classification and assignment.

5. *Rates.*—Lack of ambition to progress after long time in Navy. (This must be carefully considered in relation to policy of quotas and complements.)

6. *Sea and combat duty.*—The emotional impact of prolonged tension at sea and combat, exhaustion, apprehension, and other neuropsychiatric symptoms, including anxiety from separation from family. (Shore duty is good therapy for such a person.)

7. *Recidivism.*—Repeat offenders with poor motivation or with home problems that cannot be alleviated by the Navy to the satisfaction of the man.

8. *Physical.*—Chronic complainers with psychoneurotic complaints given as reasons for offense.

9. *Attitudes.*—Poor or antagonistic attitudes toward the Navy prior to the General Court Martial.

10. *Psychiatric evaluation.*—This over-all evaluation by experienced professional people considers these factors and many others in relation to the problem.

